

“STANDARDIZING FAIRNESS: A REGULATORY FRAMEWORK FOR SEPS AND FRAND”

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By
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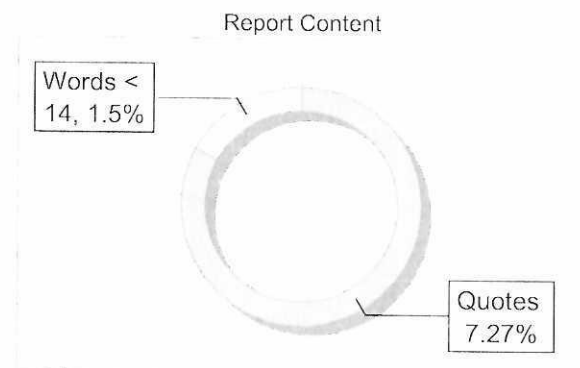
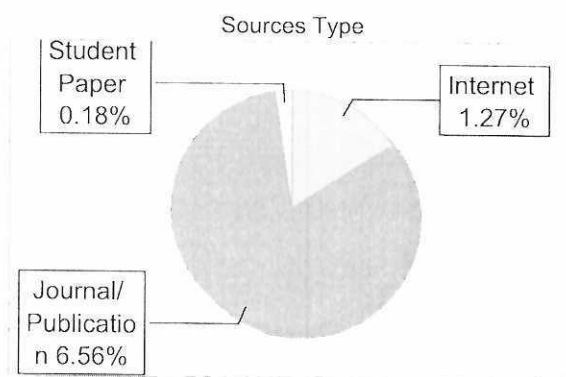
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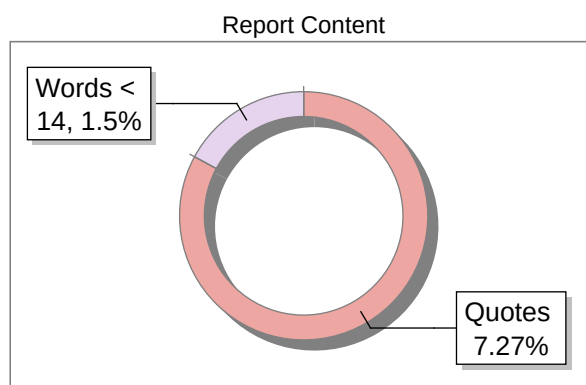
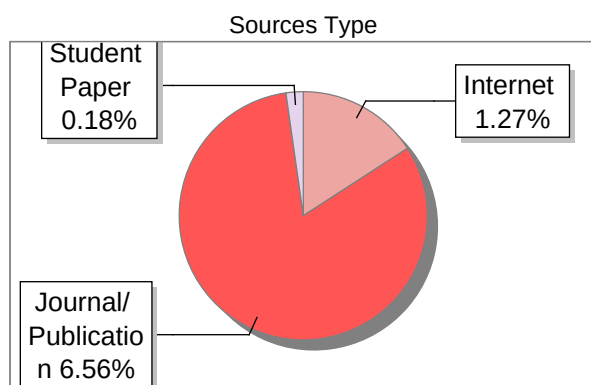
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LIST OF ABBREVIATIONS

S. No	Abb.	Full Form
1	AI	Artificial Intelligence
2	IEC	International Electro technical Commission
3	ISO	International Organization for Standardization
4	FRAND	Fair, Reasonable and Non-Discriminatory
5	PPP	Public Private Partnership
6	TEC	Telecommunication Engineering Center
7	BIS	Bureau of Indian Standards
8	EMC	Electromagnetic Compatibility
9	ETC	Electro Technical Commission
10	ETSI	European Telecommunications Standards Institute
11	IOT	International Telecommunications Union
12	IPR	Intellectual Property Rights
13	ITU	International Telecommunications Union
14	SEP	Standard Essential Patents
15	SSO	Standard Setting Organizations
16	TBT	Technical Barriers To Trade

LIST OF CASES						
S. No.	Case Name & Year	Jurisdiction / Court	Issue Involved	Relevant Provision / Principle	Decision of Court / Authority	Significance / Contribution to FRAND & Competition Framework
1	Belaire Owner's Association v. DLF Ltd. (2010)	CCI, India	Abuse of dominant position	Section 4, Competition Act	DLF held guilty; penalty imposed	Defined dominance & abuse ; strengthened consumer protection
2	CCI v. Steel Authority of India Ltd. (2010)	Supreme Court, India	Scope of competition law	Competition law objectives	Clarified role of CCI	Established competition law as economic regulation
3	U.S. v. General Electric Co. (1926)	United States	Misuse of patent rights	Antitrust principles	Patent misuse can attract liability	Confirmed IP not immune from antitrust law
4	International Salt Co. v. United States (1947)	United States	Tie-in arrangement	Anti-tying doctrine	Tie-in held illegal	Prevented IP-based anti-competitive tying
5	Eastman Kodak Co. v. Image Technical Services	United States	Tying & refusal to deal	Antitrust law	Kodak liable for anti-competitive	Limited aftermarket dominance via IP

	(1992)				conduct	
6	United Brands v. Commission (1978)	European Union	Refusal to supply	Abuse of dominance	Refusal held abusive	Ensured fair market access
7	Oscar Bronner GmbH v. Mediaprint (1998)	European Union	Essential facility doctrine	Indispensability test	Strict conditions for refusal	Introduced essential facility test
8	Lenovo v. InterDigital (2024)	UK High Court	Global FRAND licensing	FRAND principles	Court fixed global rates	Promoted uniform global licensing
9	Amazon v. InterDigital (2025)	UK High Court	Jurisdiction in SEP disputes	Global FRAND authority	Court assumed jurisdiction	Strengthened courts as global regulators
10	Samsung v. ZTE (2025)	UK High Court	Interim licensing	FRAND compliance	Interim licence ordered	Ensured business continuity & fairness
11	Lenovo v. Ericsson (2025)	UK Court of Appeal	Good faith negotiation	FRAND obligation	Interim licence mandatory	Reinforced procedural fairness
12	Nokia v. Hisense (2025)	UK High Court	FRAND obligations	Licensing transparency	Required clear FRAND offers	Made FRAND a substantive legal duty
13	Philips v. Belkin (2024)	Unified Patent Court	Injunction in SEP disputes	FRAND compliance	Permanent injunction granted	Balanced IP enforcement & fairness
14	CCI v. Monsanto	Supreme Court,	Competition &	Abuse of dominance	CCI jurisdiction	Linked competitio

	Holdings Pvt. Ltd. (2025)	India	patents		on upheld	n law with SEPs
15	Micromax v. Ericsson (2013)	CCI, India	Patent hold-up	Section 4, Competition Act	Investigation ordered	Highlighted excessive royalty concerns
16	Ericsson v. Xiaomi (2014)	Delhi High Court, India	Royalty framework	FRAND obligation	Interim royalty imposed	Introduced pro-tem FRAND mechanism
17	Telefonaktiebolaget LM Ericsson v. Lava International Ltd. (2024)	Delhi High Court, India	FRAND royalty determination	SEP licensing	Damages awarded; royalty fixed	Established clear royalty methodology & unwilling licensee concept
18	Intex Technologies v. Ericsson (2023)	Delhi High Court, India	FRAND conduct	Good faith negotiation	Structured framework issued	Developed balanced negotiation model
19	InterDigital v. Xiaomi (2021)	Delhi High Court, India	Jurisdiction & SEP disputes	Anti-suit injunction	Anti-anti-suit injunction granted	Prevented forum shopping
20	Ericsson v. Xiaomi (2014)	Delhi High Court, India	Interim royalties	FRAND compliance	Royalty deposit ordered	Ensured fair interim compensation

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ABSTRACT

The need for open and equitable licensing procedures has been highlighted by the growing dependence on Standard Essential Patents (SEPs) in contemporary technical developments, especially in areas like computers, electronics, and telecommunications. To facilitate interoperability across various technologies, licensing SEPs—patents that are fundamental to a certain technological standard—is vital. To make sure that SEP holders sell their patents to implementers in a way that encourages accessibility and prevents anti-competitive activity, the FRAND license conditions are put in place. An adequate legislative framework is required to guarantee fair procedures in the establishment of standards incorporating SEPs in the Indian setting, where Standard Setting Organizations (SSOs) are undergoing evolution. Examining the present regulatory climate around SEPs and FRAND, this thesis seeks to compare the relative merits of a uniform system and a case-by-case approach to licensing equity. It delves into the present FRAND rules' strengths and shortcomings in fostering fair and non-discriminatory licensing, as well as the role of Indian SSOs in regulating SEPs. The overarching goal of this research is to help fill in some of the gaps in our current knowledge on how to create a more equitable system for SEP licensing that encourages both innovation and healthy competition. The FRAND licensing concepts and the legislative framework around Standard Essential Patents (SEPs) are examined in this thesis, with an emphasis on how well they promote fair competition and innovation. The licensing and royalty determination processes are greatly complicated by SEPs, despite their critical importance to the development of industry standards. Taking into account the varied requirements of patent holders and implementers, this research seeks to determine whether a uniform process or a case-by-case approach is superior for establishing royalty rates in SEPs.

This study goes a step further by looking at how different Indian SSOs handle intellectual property rights (IPR) in their respective industries. To protect the public interest and the innovation ecosystem, it assesses how these regulations make it easier to create standards that include SEPs. In addition, the research evaluates SSOs' function in SEP and FRAND term management, paying special attention to how they prevent patent holders from abusing their power and so preserving market

competition. Further, this thesis takes a close look at how well the existing FRAND standards safeguard SEP licensing by making sure it's fair, reasonable, and non-discriminatory. To improve the openness and uniformity of SEP licensing processes, the study points out the good points of current frameworks, finds the bad points of FRAND principal enforcement, and suggests solutions.

This thesis offers unique insights into the need for a balanced regulatory strategy that handles the complexity of SEP licensing while supporting innovation and fair competition. It does this via a detailed assessment of current literature, legal frameworks, and case studies. In the end, the study adds to the continuing discussion about improving SEP and FRAND policies, especially considering India's changing IP environment.

CHAPTER 1

INTRODUCTION

1.1 OVERVIEW

Standardization plays a crucial role in today's technologically advanced and increasingly interconnected society by encouraging innovation and ensuring interoperability. The efficient functioning of complex systems, consumer trust in a range of products and services, and international trade all rely on standards. Modern communication networks, such as 5G, Wi-Fi, and other critical infrastructures, rely on these standards, which are often decided via collaborative processes involving several parties. But there are other challenges that arise when standardization is applied to the field of intellectual property rights (IPR). One of the most contentious areas in this respect is the management of Standard Essential Patents (SEPs) and the duties associated with FRAND agreements.

Specialized innovations that are essential to a particular standard's implementation are protected by standardization-related patents, or SEPs. Therefore, the technology that SEPs cover is essential for producing goods that fulfill requirements. The patents that are considered crucial to the standards are generally held by industry consortia or standard-setting organizations (SSOs) like the European Telecommunications Standards Institute (ETSI) or the International Telecommunications Union (ITU), and they have a great deal of sway in the market. It is more likely that the underlying SEPs will need licensing when a standard gains widespread usage since the demand for things that conform with that standard grows. Companies that depend on SEPs for competitiveness are therefore under intense pressure from SEP holders.¹

The goal of the FRAND agreement is to prevent patent holders from hindering competition or access to the standard through their patents, while also encouraging them to contribute to standardization. The highly controversial interpretation and implementation of FRAND agreements have resulted in numerous regulatory roadblocks and court fights globally, but they are necessary to ensure that market power is not abused and that the standardization process is fair.

¹ S. Kumar, "Standard Essential Patents and FRAND Commitments: The Need for a Balanced Approach," 24(2) Journal of Intellectual Property Rights 123-135 (2019)

The fact that "fair," "reasonable," and "non-discriminatory" are all subjective and up for debate adds another layer of complexity to FRAND licensing. Because these terms are subjective and rely on context, conflicts emerge between SEP holders and licensees. One party may believe a royalty rate is reasonable, while the other may think it's ridiculous. While the details of every given agreement are sure to vary, it is important to note that non-discriminatory licensing in no way mandates uniform terms for all licensees. The inherent vagueness of FRAND responsibilities has led to several legal battles as courts and regulatory authorities are forced to interpret them on a case-by-case basis. Not only can these cases rack up significant costs for all parties involved, but they also increase market volatility, which might impede the development of new technologies².

Given the importance of SEPs and FRAND duties in today's economy, there is a growing need for a robust and uniform regulatory structure to monitor them. The absence of defined regulations or globally accepted criteria for establishing FRAND circumstances creates a fragmented legal environment, which means that different nations may provide different interpretations of these duties. Multinational firms have significant challenges due to this fragmentation when it comes to complying with various SEP and FRAND licensing laws across many regions.

The increasing velocity of technological advancement, particularly in areas like the Internet of Things (IoT), artificial intelligence (AI), and telecommunications, has further increased the need of effective regulation. Along with new technologies and revisions to current standards, there will likely be an increase in disputes about FRAND duties and the spread of SEPs. Further litigation, market fragmentation, and innovation challenges can result from the standardization process being derailed due to the lack of a clear regulatory framework. Lawmakers, academics, and industry stakeholders have all come to agree that in order to address these difficulties, comprehensive regulatory frameworks are necessary. These frameworks must be able to clearly and consistently govern SEPs and FRAND responsibilities. In order to fully reap the benefits of standardization and keep the market environment dynamic and competitive, which is good for innovation, such frameworks are necessary.

² R. Sharma, "Challenges in the Enforcement of FRAND Commitments in India," 12 Indian Journal of Law and Technology 75-98 (2016).

Any set of regulations governing SEPs and FRAND agreements should aim to establish licensing criteria that are both predictable and transparent. It is necessary to establish criteria for determining if a licensing agreement is reasonable, fair, and nondiscriminatory. Clarifying FRAND duties and eliminating the existing confusion requires a clear framework, which is beneficial for both patent holders and licensees. This may lead to less bickering, more fruitful discussions, and a more stable environment for introducing new technologies.

A regulatory framework should also handle the enforcement of FRAND commitments. Regulatory bodies, arbitration panels, and courts are among the possible avenues for resolving disputes over SEPs and FRAND licensing. An effective enforcement mechanism that ensures parties will fulfill their commitments is crucial for the timely and fair settlement of any infractions. This framework should also take into account the potential of forum shopping, when one or more parties try to have a case determined in a jurisdiction that they think would be more favorable to their interests. One possible solution to this issue and to promote more consistent use of FRAND principles would be to establish a single enforcement approach for all nations.

Implementing a legal framework for SEPs and FRAND duties, together with licensing and enforcement, may help achieve the broader policy objectives of innovation and competition. For instance, authorities need to figure out how to get patent holders to contribute their discoveries to standards so they may avoid monopolistic methods that can harm consumers and impede innovation. This requires an in-depth understanding of the industry's fundamental economic processes as well as the regulatory actions that could influence markets where standards are critical³.

A regulatory framework must also include openness on the standardization procedure. Having clear and easy-to-access information on SEPs, such as ownership, licensing terms, and scope, may help parties avoid disputes and build trust. An additional benefit of increased transparency is that it reduces the chances of what's known as "patent ambush," when one party obtains an unfair advantage over another by keeping their SEPs secret until after a standard has been authorized. Regulatory efforts that

³ D. Mehta, "Standard Essential Patents and the Indian Legal Landscape," 28(1) National Law School of India Review 101-120 (2019).

promote transparency have the potential to make the standardization process more equitable and efficient.

Lastly, since many technology markets are global in character, international cooperation is critical for regulating SEPs and FRAND agreements. Since standards are typically used on a global scale, it is necessary to harmonize regulatory frameworks across different jurisdictions to provide a level playing field and prevent conflicting rules. Cooperation between nations may take many forms, including the establishment of mutually acceptable norms and guidelines that national regulators might adopt, as well as bilateral and multilateral agreements. These types of initiatives might help bring about more uniform and predictable regulatory frameworks on a global scale, which is essential for the technology industry's continued growth and development.

In SEP and FRAND commitment governance, intellectual property law, innovation policy, and competition law all intertwine to create a complex web. As standards grow in importance to the functioning of the global economy and technology continues to advance, there will be a bigger need for effective regulatory frameworks to address these issues. An equal distribution of the benefits of innovation and clear standards may be achieved with the help of a well-planned regulatory framework. This arrangement would promote competition, speed up technological innovation, and ultimately benefit consumers while still protecting patent and licensee rights. Legislators and stakeholders must take into account the diverse and ever-changing nature of the relevant sectors when building these frameworks, as well as the broader social and economic consequences of their decisions.

1.2 STANDARDS AND STANDARD ESSENTIAL PATENTS

'A collection of technical standards that aims to offer a common design for a product or process' is the simplest way to describe a standard, however there are other definitions as well. A "standard" is defined as a "document, established by consensus and approved by a recognized body that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context," as stated in the ISO/IEC Guide 2:2004 Standardization and related activities - General vocabulary. To

rephrase, a standard is a written description of a technique or procedure, or it may lay out the specifications for a product, service, system, or component. These criteria might be either voluntary or imposed by legislation⁴. On the other hand, the following is how the World Trade Organization Agreement on Technical Barriers to Trade (TBT) defines such papers to differentiate between legally mandated ones and those up for voluntary adoption:

1.2.1 TECHNICAL REGULATION

Official document outlining the features, specifications, procedures, and methods of manufacturing of a product, as well as any relevant administrative requirements that must be satisfied. Product, process, or method-specific language, symbols, packaging, marking, or labeling specifications may also be part of or the exclusive focus of this document.

To guarantee that goods and services fulfill quality, safety, environmental, and health standards, technical regulation governs their design, production, and operation. It provides standards that businesses must adhere to in order to safeguard customers, ease commerce, and encourage innovation, all of which are essential to the functioning of the economy. International organizations such as the International Electro technical Commission (IEC) and the International Organization for Standardization (ISO) develop international standards, while industry groups create voluntary standards, and governments impose mandatory standards.

Products and services must meet stringent safety and environmental standards in order for technical regulation to be effective. Because dangerous items may reach the market due to lax regulation, endangering lives and causing enormous financial losses, safety is of the utmost importance. Vehicles sold in the United States must pass rigorous safety testing and meet strict emissions rules to protect drivers and passengers from harm and the environment. Similarly, manufacturers must follow stringent quality and hygiene standards all the way through the food supply chain in order to avoid food poisoning, which is why food safety rules are so important.

⁴ Contreras J, 'From Private Ordering To Public Law: The Legal Frameworks Governing Standards-Essential Patents' (2017) 30 Harvard Journal of Law and Technology 211, 215.

In addition, promoting customer trust is greatly assisted by technological regulation. Customers are more inclined to make a purchase when they are given guarantees that the goods will be safe and of high quality. Because it promotes competition among firms to enhance product quality and innovation, this confidence is necessary for a healthy marketplace. Companies operating in this space are often subject to stringent testing and certification procedures mandated by regulatory frameworks to guarantee they meet all applicable requirements. As an example, in order to guarantee the safety and dependability of electronics for customers, they must adhere to certain electromagnetic compatibility (EMC) standards that prohibit interaction with other equipment.

Technical regulation has also had a major impact on international commerce. The need for internationally standardized criteria is growing in significance as markets get more globalized. Companies trying to break into international markets may face more hassle and higher expenses as a result of trade obstacles caused by differences in technical laws. Therefore, in order to make commerce go more smoothly, several international organizations and trade agreements stress the need of harmonizing technical norms. The Technical Barriers to Trade (TBT) Agreement is one of the several WTO accords that aims to reduce regulatory disparities and promote the adoption of international standards among member nations.

Technical regulation is not without its difficulties, nevertheless, both in its creation and its execution. Striking a balance between fostering innovation and guaranteeing safety is one of the main problems. Regulating too much might make it harder to innovate and create new technologies. For example, if the IT sector were to implement very strict restrictions, it may impede the development of new and creative technologies since firms would have to bear the enormous expenses of complying. Consequently, authorities in charge of regulation need to walk a fine line, establishing rules that guarantee safety while also enabling technical progress⁵.

Also, technological regulation has a constant challenge from the ever-changing nature of technology. Emerging fields like nanotechnology, biotechnology, and artificial intelligence often surpass current regulatory systems. Because of this, there is a

⁵ Joshua D. Wright, 'SSOS, FRAND and Antitrust: Lessons from the Economics of Incomplete Contracts' (2014) 21 George Mason Law Review 791, 802.

chance that laws may be slow to catch up, leading to situations where old rules don't cover the threats posed by new technology. This means that regulators need to be alert to new threats and opportunities and quick to change their policies accordingly. To keep rules up-to-date and effective in protecting the public interest, this flexibility is vital.

Stakeholder involvement is also essential in technical regulation. Industry representatives, consumer advocacy organizations, and specialists are among the many parties that are often consulted while new rules are being developed. Involvement like this is crucial for making sure rules are workable, efficient, and based on actual experiences. Better decisions may be made via collaborative efforts, creating a regulatory climate that works for everyone. For example, regulators may learn a lot about the possible unforeseen effects of rules via public consultations, which helps them make the right revisions before putting them into effect.

In order to guarantee compliance and safeguard customers, it is essential to enforce technical restrictions. The enforcement of standards and the imposition of fines for noncompliance are the purview of regulatory authorities. The severe repercussions, such as financial fines, product recalls, and reputational harm, make this enforcement mechanism crucial in discouraging firms from skimping on safety measures or taking shortcuts. The integrity of technical regulation relies on the implementation of effective enforcement techniques that are both explicit and comprehensive.

Several elements, such as technology improvements, globalization, and changing consumer expectations, are expected to influence the evolution of technical regulation in the future. For regulators, the proliferation of digital technologies and the IoT brings both possibilities and threats. For example, authorities need to think about how privacy and security may be affected by networked networks as smart gadgets proliferate. This calls for a review of current rules to account for the specific dangers offered by new technology⁶.

The importance of long-term viability in technical regulation is also growing. Regulatory frameworks are progressively taking environmental factors into account as society faces the problems of resource depletion and climate change. Regulations that

⁶ Richard Normand Langlois, 'Modularity in Technology and Organization' (2002) 49 *Journal of Economic Behavior & Organization* 19, 22.

seek to decrease carbon emissions, increase energy efficiency, and promote the use of sustainable materials are clear indicators of this change. A more sustainable economy may be achieved with the help of policymakers who include sustainability into technical regulation.

Products and services are subject to stringent regulations to ensure their quality, safety, and effect on the environment. Important functions it performs include safeguarding consumers, encouraging innovation, and easing international commerce. Safety, innovation, stakeholder involvement, and enforcement are just a few of the aspects that must be carefully considered in developing and implementing technical regulation. To safely and sustainably guide companies and consumers through the complexity of an ever-evolving technology ecosystem, technical regulation must continue to evolve in response to new issues. In the end, a robust economy cannot run without strong technical regulation, which ensures consumer trust, fosters innovation, and eases international commerce.

Rules, guidelines, or characteristics for things or related processes and manufacturing techniques with authorization from a recognized authority; compliance with them is not mandatory. Product, process, or method-specific language, symbols, packaging, marking, or labeling specifications may also be part of or the exclusive focus of this document.

Thus, it is now believed that standards are purely voluntary, whereas technical rules refer to legally mandated technical requirements. The A4 paper size is one example of a commonly used standard. The universally used charger for mobile phones is another good example. Technical standards may be broadly classified into two types: *de jure* standards and *de facto* standards. Regardless of whether it has been formally acknowledged by a Standard Setting body or not, a technology becomes the market leader when it receives substantial public support and extensive adoption by market players. A "de facto standard" describes this occurrence. It is common practice for organizations such as the IEEE, the International Telecommunication Union, the European Telecommunications Standards Institute, etc., to be in charge of establishing the *de jure* standards. Standard setting organizations (SSOs) are responsible for coordinating and supporting the standard setting process to guarantee that all relevant stakeholders are engaged. A global scale, a regional scale, or even a country scale

might be used to implement standards. Companies in the industrial sector often have an incentive to design goods that meet specifications. Consumers want their gadgets to be able to communicate with other people's devices, hence products that employ non-standardized technology often fail to sell. When it comes to the marketability and quality of goods and services, standards nowadays are crucial. Better product usefulness and streamlined procedures, as well as an expanded selection of complementary items offered at reduced rates due to competition, are all possible outcomes of enhanced interoperability from the perspective of customers. Standards also make sure goods and services are safe and of high quality, which protects customers against scams and gives them faith in the market.

1.2.2 STANDARD ESSENTIAL PATENT

A patent that asserts an innovation that is necessary to meet a standard is called an essential patent. Technologies that are patented are often cited in standards. A Standard Essential Patent protects technology that is fundamental for meeting a standard. According to the Washington District Court's definition of SEP in the case of *Microsoft Corp. v. Motorola Mobility, Inc.*, "a given patent is „essential“ to a standard if application of the standard requires infringement of the patent, even if acceptable replacements of that patent might have been included into the standard." Additionally, a patent is necessary "even if the patent merely reads onto a discretionary part of the standard." Producing things that meet standards necessitates the use of technology that falls under one or more SEPs.

Standards and patents work hand in hand because they both promote innovation and the spread of technology. Therefore, it is common practice for standards groups to request that members reveal and license any patents or pending patent applications that pertain to standards that the organization is working on. Companies that embrace a standard run the risk of being held financially responsible if the standard-setting body does not get licensing for all necessary patents⁷.

The term "standard essential patent" (SEP) describes one kind of patent. No product or service that doesn't infringe on these patents may be considered meeting the criteria. Industries including software, electronics, and telecommunications rely

⁷ m.r. Sreenivasa murthy, standard essential patents on fair, reasonable and non-discrimination terms, in intellectual property rights: contemporary developments,293 (v.k. Ahuja and archavashishtha, ed., 2020).

heavily on these patents because of the crucial role they play in the technical environment. To encourage innovation and healthy competition, standards are developed and put into place to guarantee that various goods work together and perform to expectations. It is important to tread cautiously when dealing with the complicated legal and economic difficulties brought up by the requirement of SEPs.

The promotion of innovation is one of the essential functions of SEPs. Instead of starting from scratch with every new product, businesses may reap the benefits of collaborative innovation by adopting generally agreed standards. For example, the telecommunications industry has seen tremendous technical advancement because to standards like 4G LTE and 5G, which have spurred enormous investment in R&D. Companies with SEPs invest in these standards' development, and in exchange, they get to license their patents, which allows them to make money. Patent holders and customers alike stand to gain from this licensing framework's promotion of continuous R&D.

The licensing of SEPs, on the other hand, is not without its difficulties, especially when it comes to the conditions under which patents are granted. Most governments mandate "fair, reasonable, and non-discriminatory" (FRAND) licensing conditions for SEPs in an effort to level the playing field and encourage innovation. Patent holders should not participate in anti-competitive behaviors by demanding astronomical sums for access to vital technology; this is the goal of the FRAND concept. The process of negotiating conditions between patent holders and implementers might become more complicated if this criteria is not followed. Disputes may arise over what is considered fair and reasonable. Sometimes these talks become heated and end up in court, which is expensive for everyone involved and may slow down innovation and new entrants to the market.

On top of that, there are worries about patent thickets, which occur when several overlapping patents cover the same technology or standard, because of the proliferation of SEPs. Due to the intricacy of the licensing process and the necessity to negotiate with several patent holders, new enterprises may find it very difficult to enter the market with their goods. Sometimes businesses choose non-standard options, which may cause market fragmentation and stifle innovation. This dynamic makes

one wonder how to strike a compromise between protecting IP and making sure new businesses can make it in a cutthroat industry⁸.

The effect of SEPs on antitrust regulations has been a growing area of interest for courts and regulators in recent years. Businesses with a large number of SEPs have been the target of antitrust investigations, which have focused on their licensing policies and any measures used to punish suspected infringers. The impact of these investigations on intellectual property rights generally and SEP enforcement in particular may be far-reaching.

Varied governments have taken varied methods to licensing, enforcement, and the use of FRAND principles, which results in substantial international variation in the regulation of SEPs. Inconsistent licensing policies and possible disputes might arise as a result of this disparity, which complicates matters for international enterprises operating in different regions. More worldwide harmonization of SEP policies and practices is being proposed as a solution to these problems. Worldwide groups working on SEP licensing and enforcement, including the (ITU) and the (WIPO), are looking at potential frameworks to improve collaboration and set more precise standards.

Especially with the rise of new paradigms like AI and the Internet of Things (IoT), the significance of SEPs will only grow in the future of technology. The importance of SEPs in facilitating innovation and economic progress is compounded by the fact that these industries are highly dependent on common standards and interoperability. To tackle the challenges of SEPs, regulators, business groups, and policymakers must work together to strike a balance between strong IP protection and the need of encouraging innovation and competition in the marketplace.

As the foundation of the standards that allow compatibility and interoperability across many sectors, essential patents play a crucial role in today's technology ecosystems. Although SEPs facilitate technological progress and innovation, they also bring certain difficulties in licensing, competitiveness, and gaining access to markets. A fair and equitable market for all market players can only be achieved via persistent stakeholder interaction, thorough examination of relevant legal and economic

⁸ Ankita Tyagi And Sheetal Chopra, Standard Essential Patents (Sep)s Issues And Challenges In Developing Economies, 22 Journal Of Intellectual Property Rights, 121, 124 (May 2017).

concepts, and skillful navigation of SEP difficulties. Sustainable innovation and economic progress will be supported by the appropriate management and regulation of SEPs as we go forward into a more interconnected and technology-driven future.

1.2.3 STANDARD ESSENTIAL PATENTS & FRANDS

A set of requirements that every device must meet in order to be considered compliant with a certain standard is recognized by the applicable standard as laid forth by the Normal Setting Organizations. To let the public know that a product is complying with standards, devices might be marked when they are determined to be in conformance with important requirements. Making a gadget that complies with standards necessitates the utilization of certain patents. Obtaining a license from the patent owner is the basic prerequisite for utilizing a patent. Members of many SSOs are required to make a legally enforceable commitment to issue licenses to businesses that express an interest in using the standard in question. The standard may not be accepted if any member fails to offer such an assurance. These licenses need to be offered on FRAND (Fair, Reasonable and Non-Discriminatory) terms²⁰ in order to encourage the standard's implementation and keep competitive issues at bay. This patent privilege is therefore not as absolute as the others. It is essential that the owner of SEP license its patented technology, which establishes a standard for the industry, under FRAND terms. A cornerstone of the standards development process is the licensing of standards essential patents (SEPs) on fair, reasonable, and nondiscriminatory (FRAND) conditions⁹.

A fundamental principle of FRAND is that patent holders should not abuse their monopoly power in order to gain an unfair advantage when a voluntary technical standard is broadly accepted; nonetheless, it is expected that the integration of patented technology into these standards would be advantageous. According to the Washington state district court's decision in *Microsoft Corp. v. Motorola Mobility, Inc.* (Supra), the value of Standard Essential Patents was renegotiated between the two companies. Motorola was found to have violated the contract by not granting Microsoft a fair and nondiscriminatory license to use its Standard Essential Patents, according to Microsoft. The FRAND promise aims to have everyone utilize the

⁹ Breznitz, D. and Murphree, M. (2011) 'Standardized Confusion? The Political Logic of China's Technology Standards Policy', Social Science Research Network (SSRN),

standard, according to Court. When the standard is widely used, there is a chance that patent holders would want more money than their patented technology is worth, which might lead to a holdup in the process.

1.2.4 STANDARD ESSENTIAL PATENTS VIS-A-VIS COMPETITION LAWS

There is a lot of consensus that the anti-trust laws have no business interfering with exclusive IP rights. Despite the importance of innovation for increased competition, a "duty to deal" is not imposed by competition rules after a business has intellectual property rights protection for its innovative technology. However, several antitrust and competition concerns arise when standards are imposed. Concerning both competition and intellectual property rights, standard setting organizations have members who agree on product standards before marketing them. Essential Patents, on the other hand, need active action due to the remote regard for intellectual property right protected technology, often in accordance with competition authorities. Essential patents that are needed to establish a standard in a particular sector cannot be used like any other patent, especially not in a way that leaves other market players out. If standard setting is to continue to be useful, it must be prevented that when an industry standard is adopted, the patent holder cannot unfairly use the newfound market power to its advantage, such as by charging exorbitant royalty rates, which would be bad for the industry as a whole. One possible approach is to get FRAND promises, in which patent owners promise to make their key patent accessible to third parties on FRAND terms, in order to accomplish this. Although it seems like a win-win situation—the patent owner gets their money out of the patent's widespread usage in the business and the other parties don't have to pay expensive royalty rates—FRAND's effectiveness depends on how well it can be enforced.

This is especially true in industries like telecoms where following industry standards is critical to functioning. Fair market dynamics need careful study of the many economic and legal issues raised by the convergence of SEPs with competition regulations¹⁰. To avoid patent holders engaging in anti-competitive actions that might hinder innovation and market entrance for new players, SEPs are inherently leased on "fair, reasonable, and non-discriminatory" (FRAND) conditions. If SEP holders use

¹⁰ Gungor, V.C., Sahin, D., Koçak, T., Ergüt, S., Buccella, C. Cecati, C. and Hancke, G.P. (2011) 'Smart Grid Communication Technologies and Standards', IEEE Transactions on Industrial Informatics, vol. 7, no. 4, pp. 529-539.

their patents to charge extortionate licensing costs or engage in exclusionary actions against rivals, it may undermine competition rules that aim to encourage fair competition and safeguard consumer welfare.

When implementing competition laws in the context of SEPs, it is typical to aim for a balance between protecting intellectual property and preventing it from inhibiting competition. In order to determine whether they fulfill the FRAND criteria, regulatory bodies and courts have examined the licensing processes of companies with substantial SEP portfolios. A patent holder may be subject to investigations and possible legal action, for instance, if it refuses to license its SEPs to certain companies or requests very high fees, which might be seen as a breach of competition regulations. This monitoring is more critical than ever before since technological standards may change at a dizzying pace and new market entrants often struggle to comprehend and comply with all the licensing agreements.

The growth of patent thickets—which happen when SEPs overlap and make it hard for businesses to implement standards—has further shown the need for regulatory oversight. When such tangles make it hard for smaller businesses to break in, anti-competitive practices that limit innovation and customer choice become a concern. Therefore, competition regulators throughout the world are keeping a careful eye on SEP holders and the impact they have on market dynamics. They are concerned about new businesses being able to join the market and acquire necessary technologies without paying astronomical license prices.

When dealing with the interaction between SEPs and competition rules, there are particular difficulties due to the international character of technology markets. Inconsistencies caused by different countries' interpretations and implementations of FRAND principles might impede multinational corporate operations.

The licensing and enforcement of SEPs are governed by different sets of legislation in each country, which may make it difficult for companies operating in many countries to navigate the regulatory landscape. This discord has implications for corporate strategy, but it also makes one wonder how well competition laws tackle anti-competitive conduct using SEPs and if there will be jurisdictional problems. Future technological developments, especially in areas like the Internet of Things (IoT) and

artificial intelligence (AI), will likely increase the importance of SEPs in competition law frameworks. Standardized protocols are crucial to the functioning and interoperability of these technologies, highlighting the necessity for explicit rules regarding SEP licensing procedures. So, it is up to policymakers and regulatory authorities to strike a balance between fostering innovation and protecting competitive practices in the regulatory landscape. The deep and crucial interaction between competition laws and Standard Essential Patents shapes the technical environment.

Despite their importance in facilitating innovation and technical progress, SEPs may jeopardize market competition if not handled correctly. Policymakers, industry stakeholders, and legal authorities must maintain a constant line of communication to build a framework that supports equitable licensing practices, stimulates competition, and, in the end, benefits consumers. A proactive strategy for regulating SEPs in relation to competition laws is crucial for promoting an environment that strikes a balance between intelligent property rights and the principles of fair competition, especially when industries undergo continuous change.

1.3 KEY INSTITUTIONS IN INDIA TOWARDS STANDARD ESSENTIAL PATENTS AND THEIR AVAILABILITY ON FRAND TERMS

Telecom Standards Development Society of India (TSDSI)

The foundation of the non-profit legal company known as the Telecom Standards Development Society of India is the participation of all stakeholders, including the government, service providers, equipment vendors, manufacturers, academic institutions, and research laboratories. This company operates in the Public Private Partnership (PPP) method. The goal of the TSDSSI, or Standard Setting Organization, is to develop and disseminate Indian-specific standards. It provides standardized solutions to meet these demands and incorporate them into the existing set of international telecom standards. Maintaining the organization's technical standards and other deliverables is TSDSI's mission. The organization also aims to safeguard intellectual property rights, encourage domestic manufacturing expertise, and take the lead in addressing the telecommunications standardization requirements of developing nations in areas such as South Asia, South East Asia, Africa, the Middle East, and others.

Standards and technical specifications based on solutions are being worked up by TSDSI to assist the Indian telecom sector in reaching its technology ambitions while also safeguarding client interests. In pursuit of this objective, TSDSI has established an intellectual property policy to safeguard the organization, its members, and all users of the technical specifications and standards that TSDSI has created. License availability and non-availability are both handled by this procedure, which is identical to the one outlined before by the European Telecommunications Standards Institute. The intellectual property policy of TSDSI is available [here](#).

Telecommunication Engineering Center (TEC)

The Telecommunication Engineering Center (TEC) is a subset of the Department of Telecommunications under the Ministry of Communications and Information Technology. Its primary mission is to contribute to the development of standards for telecom equipment, services, and interoperability. Some of the most renowned international organizations that develop standards include ETSI, ITU, ITU-T, WiMAX, IETF, IEEE, and othe0072. In order to set and maintain standards, TEC collaborates with these organizations. TEC addresses issues of intellectual property rights related to standards and provides specifications for equipment to be used in Indian contexts. Therefore, while creating its standards and specifications, TEC considers the ITU's stance on intellectual property rights. The National Telecom Policy, 2012, mentions TEC as a key stakeholder in the formation of a new National Telecom Standards formation Organization.

Bureau of Indian Standards (BIS)

The national standards body of India is the Bureau of Indian Standards (BIS), a leading institution for standardization. Each of BIS's fourteen divisions that are relevant to different industries is overseen by a "division council". The LITD (Electronics and Information Technology Division Council) is relevant to the issues made in this article. Information technology topics addressed by LITD's 21 "Sectional Committees" include interfaces, networks, and computer communications. In an effort to bring their standards in line with those of the international organizations ISO and IEC, the LITD committees have joined other division councils within BIS in this endeavor. According to reports, BIS has not yet established its own intellectual

property policy. However, the agency has taken the stance of relying on the IPR policies of International Standards Organizations as several of its standards are technically identical to international standards. If intellectual property rights (IPR) become a problem, BIS lets manufacturers that want to utilize a standard negotiate the conditions of the license.

The Global ICT Standardization Forum for India (GISFI)

Founded in 2008, the (GISFI) aims to integrate Indian ICT standards initiatives with international trends and provide greater coherence to ICT standardization in India in areas like energy, telemedicine, wireless robotics, and biotechnology. It invites input from all relevant parties and counts both domestic and international businesses as members, as well as Indian research universities.

Data privacy, future radio networks, the web, green information and communication technology, the cloud, and service-oriented networks are all areas where it maintains working groups.

A workshop on standards and IP rights was sponsored by GISFI and ITU in December 2011. While GISFI's intellectual property policy is mostly modeled after ETSI's, it does include certain unique elements.

Striking a balance between public requirements and the interests of rights holders, the policy aims to lessen economic and legal risks to stakeholders. It requires members to provide information promptly but does not mandate that they look for patents. Upon receiving notification of SEPs, GISFI's Director General is obligated to seek an irrevocable promise from the patent holder to provide licenses under FRAND conditions.

Development Organization of Standards for Telecommunications in India (DOTI)

The private Standard Setting Organization known as the Development Organization of Standards for Telecommunications in India (DOTI) is devoted to creating telecom standards that are appropriate for the Indian context. It is now comprised of eight working groups and includes both Indian and international corporations as members.

Similar to GISFI, DOSTI upholds an intellectual property policy. While it does require disclosure in a timely manner, it does not mandate thorough patent searches. We are requesting that DOSTI members who own SEPs give licenses on FRAND conditions. The process for making SEPs licenses available on FRAND conditions is likewise outlined in DOSTI.

1.4 MAJOR ISSUES INVOLVED IN SEP LITIGATION

Patent holdup:

A patent is considered "locked-in" after it becomes a commercially acceptable standard. A manufacturer can't avoid using the same if he doesn't want his product to be incompatible with other brands' offerings. When a licensee lacks viable alternatives to a certain technology, the SEP holder has more leverage in negotiations. Holdup in the patent process happens when a SEP holder tries to impose excessive royalty rates on a locked-in patent. The SEP holder may take advantage of the locked-in position to get far greater royalties than it would have gotten before the invention was included as a standard, unless an SSO is forcing it to comply with FRAND licenses. But this still happens after agreeing to FRAND since FRAND is so nebulous¹¹.

According to the CCI, "hold-up can subvert the competitive process of choosing among technologies and undermine the integrity of standard-setting activities" in reference to the Micromax and Intex instances. In the end, the burden of paying for these patents falls on the consumers. In addition, the other licensees are prevented from learning about the royalty rates applied to those earlier licenses since the licensor has bound the licensee to a non-disclosure/confidentiality agreement on the licensing terms. Major competition concerns arise in FRAND litigations as a result of this, which hinders the parties' ability to undertake license discussions.

Royalty base

Choosing the royalty base correctly determines whether a royalty level is appropriate. In most cases, the royalty rate is applied to the whole selling price of the finished product by the SEP holders, not only to the component that constitutes the infringing patent. If SEP is utilized in just one part of a multi-part product, the implementer still

¹¹ Micromax v Ericsson, Case No. 50/2013, Competition Commission of India, (November 12, 2013)

has to pay the royalties for the parts that don't use it. Determining a fee based on the whole product poses a high danger of unfairly compensating the patent holder for parts of the product that do not infringe, rendering the FRAND concept moot.

Instead of basing royalties on the product's total worth, the US Court of Appeals for the Federal Circuit ruled in *Virnetx Inc. v. Cisco Systems* that they should be tightly related to the claimed innovation.

Royalty Stacking

The practice of adding successive royalties on top of each other to get a larger total payment is known as royalty stacking. This occurs when the overall product price is exceeded because to royalties imposed on various components of a multi-component product by multiple SEP holders.

In the *Micromax* and *Intex3* cases, the CCI voiced its disapproval of the Delhi High Court's decision to base Ericsson's royalty payments on the phone's net sale price instead of the value of the allegedly infringed technology in the chipset.

This GSM chip would cost Rs. 1.25 for a phone priced at Rs. 100 and Rs. 12.5 for a phone priced at Rs. 1000, according to CCI. So, the licensee's product doesn't benefit from the patent holder's increased royalties.

The maker or licensee has to pay royalties or costs to other patent holders or developers for the numerous different software's, technological capabilities, and apps that make a smartphone more expensive.

At first glance, it seems unfair and excessively priced in comparison to high-end phones to charge two separate licensing payments per unit of phone for the same technology¹².”

Availability of Injunctive relief

If the owner of a SEP wants to make sure that the royalty rates are paid, they may use an injunction to do so. To a SEP implementer, paying a high fee could appear preferable than defending against an infringement lawsuit. Using injunctive remedies

¹² *Ericsson v Micromax*, CS(OS) 442/2013 (12 November 2014).

against licensees who are prepared to comply is clearly at odds with the FRAND pledge, as the SEP is sufficiently funded by the FRAND royalty rates. In addition to being a breach of competition rules, this might also be seen as an abuse of a dominant position. Injunctions are sought when the licensee refuses or is unable to pay the FRAND royalty that has been determined by the court, or when monetary compensation is deemed inadequate.

The fundamental premise for issuing an injunction is that the non-grantee party must incur irreparable harm. Principles of equity form the basis of Indian injunction law. In such a situation, the SEP holder can seek redress via royalties. The last remaining question is if the quantity is sufficient. Additionally, it is expected that a SEP holder who sets up an SSO would license the technology on FRAND terms. No injunction should be issued in such a situation, regardless of the royalties, unless the SEP holder suffers irreparable harm.

1.5 STATEMENT PROBLEM

There has been a dramatic increase in the number of worldwide technological standards, which has further complicated the problem of defining fairness within the framework of FRAND terms and Standard Essential Patents (SEPs). Industry standards rely on the licensing of SEPs, which are essential patents. The goal of the FRAND obligations is to make sure that licensing these patents is fair and easy for everyone. Disputes arise, however, when the terms "fair," "reasonable," and "non-discriminatory" are not clearly defined, which benefits both parties. Patent holders want remuneration for their inventions, while licensees need inexpensive, standardized technology. To strike a fair balance between these competing goals, we urgently want a well-defined regulatory framework that safeguards the financial incentives that encourage innovation while also preventing patent holders from engaging in monopolistic actions. In the public interest, this approach might clarify what amounts to fair royalty rates, curb frivolous lawsuits, and advance interoperability between countries. In order to sustain SEPs and FRAND licensing settings, regulatory agencies should create clear norms.

This would allow the technological sectors to evolve without sacrificing fair market access. In the end, a strong regulatory strategy would restore faith in the patent

system, which would promote fair technological advancement and preserve the integrity of free market competition.

Therefore we titled our study as “*STANDARDIZING FAIRNESS: A REGULATORY FRAMEWORK FOR SEPS AND FRAND*”.

1.6 NEED AND SCOPE OF THE STUDY

Need of the study

The significance of SEPs and FRAND obligations in defining the technology-driven marketplaces of today necessitates this research. License regimes that are both transparent and fair have become more important as more and more sectors depend on standardized technology, such as the Internet of Things and telecoms. Problems arise and lawsuits are commonplace since there are no clear guidelines or standards for determining what "fair, reasonable, and non-discriminatory" phrases entail. Conflicts between patent holders and licensees over royalty rates, licensing conditions, and access to important patents are common, and some parties may use their power to stifle innovation and competition. Prolonged litigation is only one consequence of these disputes; they may also limit technical advancement and market accessibility, which is bad for companies and customers. By analyzing the current deficiencies and suggesting a legal framework that promotes openness, uniformity, and equity in SEP licensing, this research hopes to fill these gaps and tackle these difficulties. The study's overarching goal is to promote a more stable and inventive technical environment by guaranteeing licensees and patent holders equal protection under the law. This allows for equitable access to crucial patents, which benefit society and the economy as a whole.

Scope of the study

In order to establish a more equitable licensing environment, this research examines the existing state of regulations pertaining to SEPs and FRAND obligations, with the goal of identifying the obstacles that exist and possible ways to overcome them.

Examining how these concepts fluctuate among countries and sectors, this research delve into the intricacies of identifying fair, reasonable, and non-discriminatory conditions. Findings provide light on conflicts between innovation incentives and

market accessibility, as well as the responsibilities of patent holders, licensees, and regulatory agencies.

This research seeks to evaluate the impact of SEP licensing discrepancies on technology markets worldwide by examining important case studies, legal precedents, and international recommendations. In addition, the study evaluate how potential regulatory reforms can lead to a more equitable patent licensing system by considering their consequences.

1.7 NOVELTY OF THE RESEARCH

This study makes a significant and original contribution to the evolving discourse on Standard Essential Patents (SEPs) and FRAND licensing by proposing a structured and context-sensitive regulatory framework tailored to the Indian legal and industrial landscape. While existing scholarship largely focuses on comparative analyses of jurisdictions such as the United States and the European Union, this study critically examines the Indian perspective by analyzing the Intellectual Property Rights (IPR) policies of Indian Standard Setting Organizations across sectors and assessing their alignment with global FRAND principles. The novelty of the research lies in its integrated evaluation of royalty determination mechanisms—contrasting standardized frameworks with case-by-case adjudication—while simultaneously addressing concerns of dominance abuse under competition law. By bridging intellectual property law, competition regulation, and standardization policy, the thesis advances a multidimensional model that identifies regulatory gaps and proposes structured reforms aimed at enhancing transparency, consistency, and fairness in SEP licensing. This comprehensive and interdisciplinary approach distinguishes the study from prior research and contributes both doctrinal clarity and practical policy recommendations for strengthening FRAND compliance in India.

1.8 OBJECTIVES OF THE STUDY

Following are the main objectives of this study.

1. To evaluate whether a standardized mechanism or a case-by-case approach is more effective for determining royalty rates in Standard Essential Patents (SEPs).

2. To analyze the IPR policies of Indian Standard Setting Organizations for developing standards involving SEPs in various sectors.
3. To evaluate how Standard Setting Organizations manage SEPs and FRAND terms to prevent dominance abuse.
4. To evaluate the effectiveness of current FRAND regulations in maintaining fair, reasonable, and non-discriminatory licensing for SEPs, highlighting their strengths, weaknesses, and areas for improvement.

1.9 HYPOTHESIS OF THE STUDY

H1: A standardized royalty determination framework for Standard Essential Patents (SEPs) is more effective than a case-by-case approach in ensuring transparency, consistency, and compliance with FRAND (Fair, Reasonable, and Non-Discriminatory) principles.

H2: The existing IPR policies and FRAND regulatory mechanisms governing SEPs in India are insufficient to prevent dominance abuse and ensure fully fair, reasonable, and non-discriminatory licensing practices, thereby requiring regulatory refinement and standardization.

1.10 DEFINITION OF THE KEYWORDS

1. **Standard Essential Patent (SEP):** Patent protection for innovations that are fundamental to meeting a certain benchmark in a particular field. In highly technological fields like telecommunications, SEPs play a pivotal role in facilitating interoperability, the smooth integration of goods from many firms.
2. **Fair, Reasonable, and Non-Discriminatory (FRAND) Terms:** The licensing conditions that SEP holders agree to, guaranteeing that everyone has fair access to crucial patents. "Fair" means that the terms do not exploit the patent's worth; "reasonable" means that royalties are set at a balanced rate that represents the patent's value; and "non-discriminatory" means that all licensees get equivalent terms.

3. **Licensing:** License is when one party agrees to use another's patented technology under certain conditions, usually including fees, and the patent holder grants this permission.
4. **Regulatory Framework:** Industry standards are a collection of rules and regulations issued by relevant authorities to ensure uniformity of practice. This term is used to describe the proposed regulations and guidelines for SEP and FRAND licensing that aim to prevent conflicts.
5. **Royalty Rate:** Patent royalties are the sum that a business must pay to the owner of a patent in exchange for the right to use that patent's protected technology. To be in conformity with FRAND, royalty rates must be set fairly.

1.11 LIMITATIONS OF THE STUDY

1. **Jurisdictional Variances:** Differences in SEP and FRAND interpretations across regions may limit the study's applicability globally.
2. **Data Accessibility:** Limited access to proprietary data on licensing agreements could restrict comprehensive analysis.
3. **Evolving Standards:** Rapid changes in technology and patent laws may impact the relevance of findings over time.
4. **Subjectivity in Fairness:** Defining "fair" and "reasonable" in licensing is inherently subjective, affecting universal conclusions.

1.12 PROPOSED FRAMEWORK OF THE STUDY

Research Design

The research strategy that has been chosen for this study is known as "doctrinal," and it is center on the creation of legal "doctrines" by examining existing legal regulations.

Research Method

The study uses an "inductive" methodology to examine particular contentious problems that may often come up.

Research Procedure

This is why we break down our research into its component parts. What follows is a breakdown of these sections: -

We start by exploring the origins of intellectual property rights, with a focus on patent law and competition law. This part begins with a historical overview of competition law, including topics such as the Roman competition regime and continuing up to the present day. This section also provides a detailed history of India's policy regarding competition law. Subsequently, the part discusses the several commissions established by the Indian government, which contributed to the formation of the present framework for competition law. Following a lengthy discussion of the MRTP Act and its failure, this section moves on to examine the Competition Act and the rationale for its passage. The several United States Acts are also covered in this section.

What follows is an explanation of what standards are and how they work, as well as an examination of the function of standard setting organizations ("SSOs"), which together form the basis of the problem. How does SSO work? What does SSO stand for? The SSO process and how SSO determines standards. This section delves deeply into the intersection of intellectual property rights and competition law. This section lays out potential hotspots where competition law and intellectual property rights could clash. In addition, the section explains why there is a clash between IP rights and Competition Law when SEP is set by walking us through the Standard Essential Patents and the Competition Law Challenges. Concerns about potential antitrust difficulties arise from the fact that a patent gives the owner of a standard essential patent (SEP) complete influence over the market.

Concerning the difficulties that standardization poses to competition, the following section goes into further depth regarding the issues with FRAND and SEP. This reveals the owner of SEP's market dominance and the potential abuse of that position. We reach the specific issues that frequently surface in FRAND and SEP lawsuits as a result.

The last section consider injunctive relief as a remedy for FRAND-related disputes. It discusses whether injunctive relief is the right choice in cases involving SEPs and whether the SEP owner loses the right to seek it because of their commitment to

FRAND. It also touches on the approach taken by India and other jurisdictions in this regard. The section delves deeper into the study of significant case laws from various jurisdictions.

1.13 PLAN OF WORK

CHAPTER 1: INTRODUCTION

This chapter outlines the background of the study, statement of the problem, research objectives, hypotheses, scope, methodology, and structure of the thesis.

It establishes the conceptual foundation by explaining the growing significance of SEPs and FRAND commitments in a technology-driven economy.

CHAPTER 2: REVIEW OF LITERATURE

This chapter critically examines existing national and international scholarship on SEPs, FRAND licensing, competition law, and intellectual property rights.

It identifies research gaps and situates the present study within the broader academic and policy discourse.

CHAPTER 3: HISTORICAL EVOLUTION OF PATENT AND COMPETITION LAW: FROM ANCIENT REGIMES TO MODERN POLICIES IN INDIA AND BEYOND

This chapter traces the development of patent protection and competition regulation from early legal systems to contemporary frameworks.

It provides a comparative perspective to understand how these two regimes evolved and increasingly intersected over time.

CHAPTER 4: INTERFACE OF COMPETITION LAW AND INTELLECTUAL PROPERTY RIGHTS IN THE REGULATION OF SEPS AND FRAND

This chapter analyzes the doctrinal and regulatory overlap between intellectual property rights and competition law, with specific focus on dominance, abuse, royalty determination, and regulatory intervention in SEP-related disputes.

CHAPTER 5: CHALLENGES, DISPUTES, AND REMEDIES IN FRAND AND SEP

This chapter examines practical issues such as royalty determination conflicts, injunctions, hold-up and hold-out problems, and judicial and regulatory responses. It evaluates existing mechanisms and highlights areas requiring reform.

CHAPTER 6: ROLE OF JUDICIARY

This chapter provides an overview of the role of the judiciary in regulating Standard Essential Patents (SEPs) and ensuring compliance with FRAND principles. It examines key areas such as judicial interpretation of fairness, determination of licensing terms, and the application of competition law. The chapter further analyses important case laws to understand evolving judicial approaches, while also addressing challenges such as jurisdictional issues, technical complexity, and patent hold-up and hold-out. It concludes by highlighting the significance of judicial intervention in standardizing fairness and strengthening the regulatory framework for SEPs and FRAND licensing.

CHAPTER 7: CONCLUSION, RECOMMENDATIONS AND FUTURE SCOPE

This chapter summarizes the major findings of the study, proposes regulatory and policy recommendations for strengthening fairness and transparency in SEP licensing, and identifies areas for future research.

CHAPTER 2

REVIEW OF LITERATURE

Li, Xiaoming et al., (2024)¹³ Standard-essential patents (SEPs) are specific types of patents that protect the technology incorporated in a standard. China has one of the world's largest telecommunication markets, and its legal policies and practices regarding SEP protection profoundly influence the competitive environment of the Chinese telecommunication market, international economic and trade cooperation, and global telecommunication technology innovation. Recently, frequent disputes in the communication sector surrounding SEPs in China's judicial practice revolved around the fair, reasonable, and non-discriminatory (FRAND) principles, embodying three key issues: patent hold-up, licence fee rates, and anti-suit injunction. Regarding the patent hold-up and hold-out of SEPs in the telecommunication industry, a balance of interests between SEP holders and implementers in licence negotiations should be achieved under the guidance of the principles of FRAND from the perspective of legislation, administrative management, and the judiciary. Concerning licence fee rates, billing benchmarks should be judged based on individual cases, utilizing a comprehensive approach combining comparable licence agreement methods and top-down methods to determine a fair and reasonable licencing fee acceptable to all parties.

Chakraborty, Amlan. (2024)¹⁴ Standard-setting organizations (SSOs) are critical policy-making bodies that have a decisive bearing on technical sectors that are not just global, but also in Indian society. They form rules that become the reference point for stepping up the development and deployment of the tech. This study is designed to open the curtains and delve into SSOs' standard-setting process in the Indian ICT sector and assess the challenges that emerge. The worldwide efficient methods employed by the global SSOs and contrast them with the Indian ones to spot correlations. Moreover, Indian SSOs' IPRs hidden under Indian patent laws will be

¹³ Xiaoming Li, Zi Cheng and Meixin Du, "Standard-Essential Patent Legal Protection in China's Telecommunication Industry: An International Trade and Economy Perspective" (2024) 32(2) Asia Pacific Law Review 504–523, DOI: 10.1080/10192557.2024.2349374.

¹⁴ Chakraborty, Amlan. "Role of Standard Setting Organizations in the Indian Ict Sector: an Intellectual Property Law Analysis," 18(3) Revista de Gestão Social e Ambiental, 70-80, (2024).

also looked at. In the end, apart from the recommendations for upgrading and aligning the policies regarding the standardization of ICT equipment in India, we will also provide some suggestions. The sequel of this process will be the exploration of IP laws such as patents in India focused solely on patent licensing - the standardization practice carried out by patentees. Emphasize the standard-setting actions of Indian SSOs by highlighting the problems encountered. A comparative analysis of substantive cooperation between inter-planetary and Indian anti-space security organizations will be carried out. Lectures covering how Indian SSOs match the Indian Patent Act and Rules will accordingly be given. The implications of the high effect of ICT standardization in India will be suggested. Considerable facts will be culled from doctrinal law, and each of the methods used in the licensing of education institutions will be examined. Research Implications: Improving standard-setting processes by key Indian SSOs such as BIS (Bureau of Indian Standards), ISRO (Indian Space Research Organisation) and ISIF (Indian Standards and Industrial Classification of All Economic Activities) Moreover, the Indian IP legal system and licensing structure will be proposed to ensure integration barriers are addressed and the standardization of the ICT is improved.

Wang, Junlei et al., (2022)¹⁵ with its focus on standards and cutting-edge technology, Intelligent Connected Vehicles (ICVs) have emerged as a key strategic industry in China. Competition in the automobile sector has shifted its attention to Standard Essential Patents (SEPs) on a worldwide scale. Almost all of the major automobile firms are dealing with licensing and litigation issues created by SEPs, despite the fact that these businesses spend extensively in research and development. It is more relevant to control the misuse of SEPs from an anti-trust standpoint in China than patent law or other private laws.

Patra, Soumya & Raju, K.. (2021)¹⁶ only a few of corporations own the lion's share of patents pertaining to vehicle safety systems. Solutions that go beyond what is protected by exclusive mechanisms, such as patents, are necessary for the absorption and application of such advances in big markets. Based on what we know about standard-essential patents in the communication industry, we need to apply a similar

¹⁵ Wang, Junlei & Wang, Liangliang & Long, Yue. "Analysis on The Licensing of Standard Essential Patents and Its Anti-trust Regulation for Intelligent Connected Vehicle," 5(3) *Frontiers in Business, Economics and Management*. 69-73 (2022).

¹⁶ Patra, Soumya & Raju, K.. "Standardization and Standard Essential Patents for Public Good: Application in Automotive Industry," 27(1) *SASI*. 10-40 (2021).

idea in other fields, such as car safety systems, horizontally. The need of a pragmatic strategy for a more generalized technical, economic, and social goal is the intended focus of this research.

Nikolic, I. (2021)¹⁷ This book provides a comprehensive analysis of the licensing framework for Standard Essential Patents (SEPs) in the context of modern connectivity technologies such as 5G and the Internet of Things (IoT). It examines the legal, economic, and policy dimensions of FRAND (Fair, Reasonable, and Non-Discriminatory) licensing and highlights the increasing complexity of SEP disputes worldwide. The author explores how courts and regulatory bodies in jurisdictions such as the EU, US, and UK approach FRAND obligations and licensing negotiations. The book also evaluates how past experiences in the smartphone industry can inform future regulatory frameworks for emerging technologies. Overall, it aims to reduce uncertainty and promote fairness in SEP licensing by suggesting improvements to the existing legal framework.

Liu, K. C., & Hilty, R. M. (2021)¹⁸ This book examines the development of technical standards and the role of Standard Essential Patents (SEPs) in global innovation ecosystems. It provides a detailed analysis of how FRAND commitments are interpreted and implemented across different jurisdictions, with a particular focus on Asia. The authors explore the business models of SEP holders, the challenges of licensing negotiations, and the convergence of legal standards in major economies. Importantly, the book emphasizes the need for ex ante regulatory mechanisms to ensure fairness and reduce conflicts arising from divergent legal approaches. It also includes extensive discussion of recent SEP disputes and proposes solutions for harmonizing global FRAND practices.

Horn, Henrik. (2020)¹⁹. There is a substantial body of work that examines how standard-essential patents should understand FRAND agreements. Even though most standards are employed in worldwide markets, the literature mostly ignores international aspects. When national regulatory bodies have differing views on how to interpret FRAND agreements, this article utilizes a basic economic context to weigh

¹⁷ Nikolic, I. (2021). *Licensing Standard Essential Patents: FRAND and the Internet of Things*. Hart Publishing.

¹⁸ Liu, K. C., & Hilty, R. M. (2021). *SEPs, SSOs and FRAND: Asian and Global Perspectives on Fostering Innovation in Interconnectivity*. Routledge.

¹⁹ Henrik Horn, "International Jurisdiction over Standard-Essential Patents," 5(1) SSRN Electronic Journal 1-37 (2020).

the benefits and drawbacks of the two primary jurisdictional grounds in international law: the Territoriality Principle and the Nationality Principle. The article details the cases when the bases are able to execute efficient results and those where they are unable to do so. Additionally, the article demonstrates how the results may be enhanced by non-discrimination requirements.

Solarte-Vasquez, Maria et al., (2020)²⁰ An more knowledgeable and educated society—one that can thrive in the face of new political, economic, and sociotechnical paradigms—is within reach, and universities and colleges all across the globe are on long, winding paths of organizational transformation to get us there. Within this framework, top institutions have embraced the Research-Based (Rb) method as an essential part of their plans to integrate their primary pedagogical functions: instruction, study, and investigation. But reports of major implementation-level difficulties are prevalent, even though there have been plenty of attempts. The literature reveals that pupils lack confidence, independence, and academic research and writing abilities, which are particularly illuminating. Institutional arrangements typical of public universities in the European Union, such as Estonia's, are among the topics covered in this article, which also updates the idea of research-based maps and delves into the multi-level regulatory framework that has influenced the execution and coordination of educational initiatives. It highlights the significance of reflexive and well-justified normative decision and improves our comprehension of complicated relationships between institutions and regulations.

Gonzalez Otero, Begoña & Chopra, Sheetal. (2019)²¹ India's digital revolution has been driven by the telecom industry. Recent years have seen a dramatic shift in the dynamics of connection and engagement in India, driven by soaring data consumption and lightning-fast technological adoption. India is reshaping its digital identity as the world's leading data user and number two smartphone market. Innovative businesses that want to be paid for their work have also brought about this digital transition, usually via licensing.

²⁰ Maria Solarte-Vasquez & Kristi Joamets, “Regulatory Framework of the Research-Based Approach to Education in the EU,” 10(3) *TalTech Journal of European Studies* 1-10 (2020), doi: 10.1515/bjes-2020-0024.

²¹ Gonzalez Otero, Begoña & Chopra, Sheetal. “Intellectual Property and Standardization: Key Aspects for an Innovative India,” 3(2) *International Journal of Public Policy*, 14-22, (2019).

Nikolic, Igor. (2019)²². Thesis topics include the future of the Internet of Things and the legal licensing structure of standard essential patents (SEPs). This is accomplished by examining the present FRAND licensing models and their suitability for the altered IoT landscape, as well as by proposing new approaches to the original goal of licensing SEPs on fair, reasonable, and nondiscriminatory (FRAND) conditions. The current state of knowledge on FRAND licensing terms is lacking clarity, and this thesis aims to fill that gap by offering a thorough examination of many aspects of the FRAND commitment from a legal and policy perspective. This thesis will examine various aspects of the FRAND commitment, including its legality and enforceability, the function of contract and competition laws in making sure that commitments are followed, the principles of the FRAND royalty, how to calculate the FRAND royalty, what the right FRAND royalty base should be, what the non-discrimination requirement means, whether licensing is necessary at every stage of the supply chain, and what remedies are available when SEPs are infringed. A thorough explanation of the FRAND licensing structure will be provided by the answers to each part. The thesis will first define FRAND concepts and then examine whether the present FRAND licensing system is appropriate for the Internet of Things (IoT). It will be shown that the existing methods of bilateral licensing, which primarily center on cross-licensing, would not be sufficient for the Internet of Things (IoT). In order to make the SEP licensing framework in the IoT more transparent and predictable, this thesis will analyze existing ideas to alter the SEP licensing landscape and propose several approaches to that goal.

Podszun, Rupprecht. (2019)²³. With the need to have access to standard essential patents for the Internet of Things, the argument over how to encourage competition in relation to patent exclusivity has taken on new dimensions. More connection in areas like autonomous driving might be stymied by patent thickets or patent ambushes. Still, in the Huawei case, the Court of Justice made it harder to intervene when a company used a forced license to defend itself against accusations of patent infringement. As a result, in its 2017 message on standard essential patents, the European Commission, which aims to facilitate the Internet of Things, has suggested other instruments rather than enforce the abuse of dominance rules in patent cases.

²² Igor Nikolic, "Licensing Standard Essential Patents: FRAND and the Internet of Things," 45(4) UCL 1-10 (2019).

²³ Rupprecht Podszun, "Standard Essential Patents and Antitrust Law in the Age of Standardization and the Internet of Things: Shifting Paradigms," 50(6) IIC - International Review of Intellectual Property and Competition Law 15-25 (2019).

You might say that the ideas are laying the groundwork for regulation, because they call for more open source and more license transparency. Additionally, the plans aren't perfect. The issue will likely be addressed by the Commission via the introduction of sectorial regulation. A more productive approach could be to follow the lead of Dow/DuPont and adopt an innovation-oriented merger policy; (c) apply interim measures in the IoT context in accordance with Art. 8 of Regulation 1/2003 with presumptions of dominance and abuse; and (a) implement competition-law controls over IoT platforms.

Kathuria, Vikas & Lai, Jessica. (2018)²⁴ Requiring a Non-Disclosure Agreements (NDAs) is a common business practice used to safeguard the commercial interests of a licensor and a licensee in intellectual property licensing matters. The recent litigation involving Standard Essential Patents (SEP) has, however, raised doubts over the practice of patentees requiring NDAs before licensing SEPs to putative licensees. It has been argued that the inclusion of royalty rates in NDAs leads to discriminatory pricing of technology — a violation of the commitment to licence under fair, reasonable and non-discriminatory (FRAND) terms. That is, licensees cannot know if they receive non-discriminatory terms, if they cannot compare their licences due to NDAs. This article examines this issue from both theoretical and practical perspectives, and concludes that the inclusion of royalty rates in NDAs may be justified in view of the technological and commercial realities involved in SEP licensing.

Gunther Friedl, Gunther & Ann, Christoph. (2018)²⁵ We propose and discuss a novel approach for calculating FRAND royalties based upon average total cost per patent plus a reasonable return for the patent holder. Our approach relies upon principles common in regulated industries such as telecommunication networks. Compared to

²⁴ Kathuria Vikas and Jessica Lai, “Royalty Rates and Non-disclosure Agreements in SEP Licensing: Implications for Competition Law” (2018) 40(3) European Intellectual Property Review 357–367.

²⁵ Gunther Friedl and Christoph Ann, “A Cost-Based Approach for Calculating Royalties for Standard-Essential Patents (SEPs)” (2018) 21(3) Journal of World Intellectual Property, DOI: 10.1111/jwip.12104.

existing approaches that use net sales or fractions thereof as the basis for royalty calculation, our approach has the advantage of arriving at an estimate for FRAND royalties without the need to rely upon comparable licensing transactions. Thus, our approach helps to more accurately define royalty ranges that are FRAND compliant.

Gupta, Kirti. (2017)²⁶ The policies of major (SSOs) regarding Intellectual Property Rights (IPR) are a topic of continuing debate, as is the best way to resolve licensing disputes involving Standard Essential Patents (SEPs) that are subject to FRAND licensing commitments. In the midst of heated controversy throughout the world, India is now formulating its legal position on FRAND conflicts. This essay draws a connection between the continuing FRAND-related conflicts in India and the worldwide conversation on SSO IPR laws and SEPs, focusing on the economic and legal concerns that underpin both. The future of India is highly dependent on the policies it adopts and the development of its legal system.

Henningsson, Kristian. (2016)²⁷ The paper explores the controversial topic of pursuing injunctive action as a solution for SEP infringement under FRAND agreements. The purpose of this is to contribute to the continuing discussion over the circumstances in which a party to an agreement establishing standards may lawfully seek injunctive relief. This article seeks to provide a solid legal basis for determining the existence of such a right by examining different approaches and doctrines in the US and the EU. It is not oppressive, the report contends, to seek an injunction to ban the use of a SEP. There are a lot of approaches that seem to be able to balance the main goals while thinking about the benefits of standards. The latest decision by the EU's highest court clarified what a "willing licensee" is and how a patent holder may use FRAND to obtain an injunction for a SEP.

Blind, Knut et al., (2015)²⁸ A company's ability to innovate, which is frequently dependent on creating and using cutting-edge technology, has a direct correlation to the company's financial success. Having IPRs is crucial for staying ahead of the competition, particularly in the highly overlapping information and communication technology (ICT) sector. Forward citation and family size are two of the many patent

²⁶ Gupta, Kirti. "FRAND in India: emerging developments," 30(1) IIMB Management Review. 1-10, (2017).

²⁷ Kristian Henningsson, "Injunctions for Standard Essential Patents Under FRAND Commitment: A Balanced, Royalty-Oriented Approach," 47(4) IIC - International Review of Intellectual Property and Competition Law 1-10 (2016).

²⁸ Blind, Knut & Neuhäusler, Peter & Pohlmann, Tim. "Standard essential patents to boost financial returns: SEPs to boost financial returns," 46(1) R&D Management. 10-40, (2015).

value metrics that we measure. In particular, we pay close attention to data on a patent's technological standing, as evaluated by how crucial the property is to a technology benchmark. Our next step is to extrapolate the impact of these metrics on ROA for various businesses. We can show that standard setting organizations (SSOs)—both official and informal—substantially boost a company's return on assets when the company declares a patent to be standard essential. For patents announced to informal SSOs, the impact is greater, and it last for two years. We further show that the data follows an inverted U-shaped distribution, and our statistical analysis verifies that the positive incremental impact of critical patent declarations on financial performance has a threshold.

Kapitsa, Yuriy & Aralova, N.. (2015)²⁹ The existing approaches used in determination of the royalty rates for technology transfer contracts and based on the experience of research institutions of the National Academy of Sciences of Ukraine, research organizations and universities in Europe and USA were reviewed. The analysis of the existing rates has been made as well as recommendations on determination of the royalty rates for technology transfer contracts between research institutions and foreign and domestic partners have been worked out. *Science and Innovation*, 2015, No 11(2) p. 51-68

Lerner, Josh & Tirole, Jean. (2015)³⁰. A key concern with standard setting as a policy is the potential for patents that were not relevant before to being included in a standard to become patents that are crucial to the standard. To limit the monopolistic power they may establish, most bodies that design standards ask patent holders to agree to issue licenses on acceptable conditions. As one would expect, such promises encourage legal action. Structured price commitments restore competition and may not develop spontaneously in the marketplace. This study analyzes many inefficiencies associated with the absence of price commitments and offers a methodology for analyzing these problems.

²⁹ Yuriy Kapitsa and N. Aralova, “Determination of Royalty Rates for International Technology Transfer Agreements” (2015) 11(2) *Science and Innovation* 51–68, DOI: 10.15407/scine11.02.051.

³⁰ Josh Lerner & Jean Tirole, “Standard-Essential Patents,” 123(3) *Journal of Political Economy* 547-586 (2015), doi: 10.1086/680995.

Jones, Alison. (2014)³¹. Regarding the case of Huawei Technologies v. ZTE, the Regional Court sent several questions to the Court of Justice. The petition asked the court to rule on the question of whether or not a patent holder, in this case a standard-essential patent (SEP) holder, could abuse their dominant position by trying to stop a potential licensee from using their patent, even though the holder had previously promised to license the SEP to anyone on fair, reasonable, and nondiscriminatory terms (FRAND). Whether and when competition law may legitimately infringe on exclusive patent rights is one of many contentious questions that this case brings to light at the intersection of antitrust and patent law. To set the stage for answering the problems posed and exploring potential solutions, this article begins by reviewing the case's history. Examining the issues posed to the Court in the Huawei Technologies case within this backdrop, it contemplates potential responses. It implies that jurisprudence has established certain principles that may be used to build a response, even while EU precedent does not provide a clear answer to the issues asked. But even if this is taken care of, there are other serious, challenging issues that still need to be worked out, the report says. Given the wide-ranging potential for disagreements between SEP-holders and implementers regarding fundamental issues, it is crucial to establish mechanisms that facilitate the swift and efficient resolution of FRAND disputes. This will ensure that both parties benefit from the process.

Larouche, Pierre & Zingales, Nicolo. (2014)³² Are third-party implementers allowed to practice a standard reading on Standard-Essential Patents (SEPs) when the parties disagree on the terms of the license? If so, can the holder of the SEP who committed to license on FRAND terms seek injunctive relief to prevent the implementer from doing so? The unique European aspect of this discussion is the main subject of this article. Despite the importance of the subject, it looks at the varied approaches used by the most prominent Member States in implementing Directive 2004/48, which deals with the protection of intellectual property rights. That void in harmonization may be filled by using EU competition rules. This article summarizes the Huawei v. ZTE concerns presently before the CJEU and discusses the recent Commission rulings on Motorola and Samsung. With its upcoming ruling, the CJEU should aim to

³¹ Alison Jones, "Standard-Essential Patents: Frand Commitments, Injunctions and the Smartphone Wars," 10(1) European Competition Journal 1-10 (2014)

³² Larouche, Pierre & Zingales, Nicolo. "Injunctive Relief in Disputes Related to Standard-Essential Patents: Time for the CJEU to Set Fair and Reasonable Presumptions," 10(3) European Competition Journal, 551-596 (2014).

establish correct presumptions for the application of competition law in SEP disputes including FRAND agreements, keeping in mind the larger role and influence of EU competition law in these issues.

Contreras, Jorge. (2013)³³. Mobile phones, laptops, digital files, and many more devices in today's networked economy rely on technical compatibility standards. Participants in most standards-development organizations (SDOs) are obligated to license standard-essential patents on FRAND-compliant terms, which means that the conditions must be fair, reasonable, and non-discriminatory. It is believed that FRAND obligations would prevent patent hold-up, which occurs when an industry standard is extensively used but then unreasonable royalty demands are imposed. The FRAND pledges are unreliable and nebulous, but at first glance they appear to reassure product suppliers that patents would not hinder the production and sale of items that comply with standards. When several patent holders claim ownership of the same standard and seek royalties for it, a practice known as patent stacking, they are unable to resolve the issue. A new approach to FRAND is required, according to many, because of the current rise of litigation in the IT sector and others. A lot of this litigation involves the interpretation and execution of FRAND obligations. In this work, I provide a fresh approach to the SDO FRAND issue by drawing on the relevant area of patent pools. Participants in patent pools are several individuals or companies that have agreed to share the royalties on all of their patents. Market players may produce and sell goods that comply with standards with a high level of assurance about their total royalty burden thanks to this framework, which has been used in conjunction with several successful industry standards. Although patent pools may not be suitable for most standards created in an SDO environment because of their high cost and administrative overhead, a "pseudo-pool" technique may be used to modify the important aspects of pools for usage in SDOs. Principal components of the pseudo-pool technique are as follows: (a) all parties involved in the SDO must declare patents honestly. (b) It is encouraged that working groups consisting of patent holders and potential vendors establish aggregate royalty rates as standards. (c) As long as the aggregate royalty agreement is in place, patent holders can continue to grant licenses on FRAND terms. (d) A proportionality measure determines each

³³ Jorge Contreras, "Fixing Frand: A Pseudo-Pool Approach to Standards-Based Patent Licensing," 79(1) Antitrust Law Journal 1-10 (2013), doi: 10.2139/ssrn.2232515.

patent holder's share of the aggregate royalty. (e) Over-declaration of patents is punished. (f) Patent holders can license their patents independently of the pseudo-pooling arrangement. (g) If they prefer, patent holders have the option to opt out of the collective royalty structure. Several regulatory bodies have endorsed this practice, which has several precompetitive advantages, and our proposal supports it by encouraging cooperative negotiation of royalty rates before standard lock-in. The existing ambiguity over royalty rates on standardized goods is intended to be removed by the proposed framework, which would also tackle the related problem of patent royalty stacking.

Kesan, Jay & Hayes, Carol. (2013)³⁴. Intellectual property and standards are about to collide in the Internet, computer, and telecoms sectors. Standards required for interoperability rely on a number of patented technologies, which span a large portion of these sectors' technological landscape. The disclosure or pledge to license critical patents on fair, reasonable, and non-discriminatory (FRAND) terms to standard implementers is a requirement of several standard-setting organizations' (SSOs') intellectual property (IP) policies. But many SSOs also make it clear that they won't intervene in conflicts over licenses. As a consequence, patent owners and standard implementers are left to resolve their disputes, which may lead to generalist judges handling matters involving cutting-edge technology that might affect consumers in a significant way. We go into the theoretical underpinnings of FRAND commitments and review relevant case law to reveal the limitations of applying ideas based on patent, antitrust, and contract law to issues related to the FRAND commitment. Although there are numerous cases where a contract-based theory might be useful, we point out that when it comes to FRAND agreements, contract theory has serious limits. The issue of maintaining FRAND obligations after the transfer of a crucial patent is one that contract theory cannot adequately handle. In this article, we provide a new way of looking about FRAND agreements via the lens of property law. We believe that patents within the framework of standards fall within the category of law that cannot be neatly classified as "in rem" or "in personam," as was shown in the recent work by Merrill and Smith about the interaction between property and contracts. Thus, our property approach highlights the FRAND commitment as

³⁴ Jay Kesan & Carol Hayes, "FRAND's Forever: Standards, Patent Transfers, and Licensing Commitments," 89(1) SSRN Electronic Journal 10-20 (2013).

establishing a relationship similar to a servitude under real property law. However, we also recognize the significance of contract law concepts in addressing several other matters. We propose two primary measures to ensure that FRAND obligations remain viable: We argue that courts should treat FRAND commitments like property and contracts, and that they create a servitude that follows the patent. Secondly, when an infringer needs to use a patent to comply with a standard, courts and adjudicative agencies should reject attempts to impose injunctions on that use. The patent owner is indicating that damages would be sufficient to compensate for the loss of exclusivity when they make a FRAND pledge, and injunctions against SEPs might have greater detrimental impacts on consumers and competition than injunctions against non-SEPs. Therefore, we strongly suggest that courts interpret a FRAND pledge as shifting the focus from property rules to liability rules. Adopting these two suggestions would put product conformance manufacturers on stronger legal foundation, as they will be able to be certain that a license to all patents necessary to a standard will be readily available. Further investments and the adoption of standardized technologies will be encouraged by the improved legal certainty that comes from strictly delimited property and contractual rights. This, in turn, will ensure that the market for innovation remains vigorous.

Lemley, Mark & Shapiro, Carl. (2013)³⁵. Licensing any standard-essential patent on FRAND (Fair, Reasonable, and Non-Discriminatory) conditions is a common requirement for members of Standard Setting Organizations (SSOs). Sadly, there have been a slew of high-profile conflicts lately concerning the meaning of these "FRAND commitments" and the best way to implement them. To help SSOs accomplish the FRAND commitments' aims with far less litigation and increased efficiency, we provide a straightforward set of patent standards. The standard-essential patent owner is required to engage in binding baseball-style (or "final offer") arbitration with any willing licensee to establish the royalty rate if they and the standard implementer cannot reach an agreement on licensing terms, according to our proposed approach. For any standard-essential patents owned by the implementer that are based on the same standard, a reciprocal FRAND Commitment may be required in order to fulfill this commitment.

³⁵ Mark Lemley & Carl Shapiro, "A Simple Approach to Setting Reasonable Royalties for Standard-Essential Patents," 28(1) SSRN Electronic Journal 1015 (2013), doi: 10.2139/ssrn.2243026.

Dewatripont, Mathias & Legros, Patrick. (2008)³⁶ In this paper we abandon the usual assumption that patents bring known benefits to the industry or that their benefits are known to all parties. When royalty payments are increasing in one's patent portfolio, private information about the quality of patents leads to a variety of distortions, in particular the incentives of firms to "pad" by contributing weak patents. Three main results that emerge from the analysis are that: (i) the threat of court disputes reduces incentives to pad but at the cost of lower production of strong patents; (ii) mitigating this undesirable side-effect calls for a simultaneous increase in the cost of padding, that is, a better filtering of patent applications; (iii) upstream firms have more incentives to pad than vertically-integrated firms which internalize the fact that patent proliferation raises the share of profits going to the upstream segment of the industry but at the expense of its downstream segment. This seems consistent with recent evidence concerning padding.

RESEARCH GAP

A research gap in the area of "Standardizing Fairness: A Regulatory Framework for SEPs and FRAND" lies in the insufficient exploration of a universally accepted regulatory framework that balances the interests of all stakeholders, particularly in the rapidly evolving technological landscape. While there is substantial work on defining the concepts of Standard Essential Patents (SEPs) and Fair, Reasonable, and Non-Discriminatory (FRAND) terms, much of the existing literature focuses on the challenges related to enforcement, valuation, and transparency, often from a legal or economic perspective. However, limited attention has been paid to the practical application and harmonization of these concepts across different jurisdictions, especially given the global nature of technology and innovation. Moreover, the existing frameworks fail to comprehensively address the complexities introduced by emerging technologies such as 5G, artificial intelligence, and the Internet of Things (IoT). There is also a need to assess the role of regulatory bodies in ensuring the consistent and equitable implementation of SEPs and FRAND terms, alongside mechanisms that can prevent patent hold-up and abuse in negotiations. A more

³⁶ Mathias Dewatripont and Patrick Legros, "'Essential' Patents, FRAND Royalties and Technological Standards" (2008) 61(4) *Journal of Industrial Economics*, DOI: 10.1111/joie.12033.

integrated approach that includes technology-specific considerations, multi-jurisdictional cooperation, and the interests of both patent holders and implementers is an area that remains underexplored, creating an opportunity for future research.

CHAPTER 3

EVOLUTION OF INTELLECTUAL PROPERTY RIGHTS REGIME AND ANTITRUST REGIME

3.1 INTRODUCTION

But, as Cheryl Thompson put it, "competition breeds excellence," and the idea of competition laws has been gaining significant traction in recent years. A market needs to compete not only domestically but also internationally if it wants to thrive, expand, and innovate. In order to ensure that consumers may get their hands on reasonably priced, high-quality products and services, competition law aims to punish businesses that engage in deceptive or otherwise detrimental trade practices. Consumers gain from competition because it encourages new ideas, cuts prices, makes more products and services available at affordable rates, gives them more options, and, ultimately, helps the economy flourish and everyone benefits from it. Therefore, it is reasonable to assume that competition is crucial to preserving social and economic stability. Because of this awareness, policymakers in many nations have passed competition laws tailored to their economic growth, with the goal of encouraging healthy competition, creating more equitable marketplaces, and safeguarding consumers' interests.

Understanding the identity, relevance, and goals of competition law, as well as the elements that impact decisions, is crucial for appreciating the law's enormous importance and relevance to the national economy.

3.2 EVOLUTION

3.2.1 EARLY PERIOD

The Roman government attempted to regulate price variations and unjust business activities, which laid the groundwork for modern competition legislation. The Greeks restricted massive purchases of corn and outlawed grain trader monopolies in the 4th century BC.³⁷ The death sentence and other severe punishments were available for transgressions. "Under Lex Julia de Annona, the first recorded regulation against monopolies, enacted approximately 50 BC, anybody who, either

³⁷ D.V. Cowen, "Ancient Origin of Competition Law: A survey of the law relating to the control of monopoly in South Africa" The South African Journal of Economics (1950)

alone or in conjunction with others, did anything that artificially raised the price of maize was penalized harshly." To protect its inhabitants against shady businesspeople, the Roman Empire enacted many laws. In 301 AD, Diocletian put an end to the practice of executing anyone who defied his decrees by, for example, hiding or artificially inflating the cost of common commodities.

Later emperors, like as Justinian, codified Roman law by including the *lex-Julia de-annona* and the *Zenos Edict*. When it came to the economics of monopoly power and how to protect it, the Romano-Dutch jurists were dead set," points out Cowen. Monopoly power, they understood clearly, is the ability to dominate a market by preventing legitimate competitors from entering it. The fact that merchants can gain monopoly power by agreeing not to compete is something they saw clearly, and they also noticed that once monopoly power is achieved, it often tries to achieve its goals through artificial scarcity.

The English government finally did anything about monopolies by passing anti-monopoly laws and instituting other restrictive policies. There were three forfeitures that King Edward the Confessor could inflict on England. One of them was "fore steel," which literally means "buying up goods before they reach the market and then inflating their prices." The practice was first mentioned in the *Domesday Book* in 1086. Laws governing several other commodities were also enacted simultaneously by numerous other nations. Between 1283 and 1305, King Wenceslas II of Bohemia drafted the *jurismetallici* section of the constitution. This section included "laws against "combinations" of ore traders who plotted to artificially inflate the prices of metal ore. The direct effect on people made grain and food by-product pollution a major worry.

The Statute of Labors of 1349, passed during the reign of King Edward III, established minimum salaries for workers and mandated the sale of food at fair prices. The penalty for rule violations was also addressed in the statute.

Trans boundary trade ushered in a new economic era for Europe in the 15th century, bringing with it tremendous prospects. This era was marked by significant change across the continent. To hasten development and prosperity, the English crown

instituted industrial monopoly permits in 1561.³⁸ Parliament ratified the Monopolies Statute. In an effort to facilitate the rapid expansion of trade and commerce, several laws were passed throughout Europe.

3.2.2 MODERN PERIOD

USA

There are three major antitrust statutes in the US: the Sherman Antitrust Act of 1890, the Federal Trade Commission Act of 1914, and the Clayton Act of 1914. For the most part, contemporary competition law may be traced back to anti-trust legislation in the United States (also called "competition laws" or just "anti-trust"). Prior to the enactment of antitrust laws in the US, the common law recognized healthy competition among businesses. After the American Civil War ended, the country experienced rapid industrialization, giving rise to a number of huge corporations called "trusts" that dominated industries such as railroads, sugar, oil, and steel. Because these trusts controlled the bulk of the shares, the monopoly was severely abused, and other individuals and small businesses were unable to compete. Due to the lack of a statute addressing the matter, judges were left with the exclusive authority to make determinations on the validity of trade restrictions prior to the Sherman Act.

The abuse of monopolies was outside the jurisdiction of the judiciary. In 1890, Republican Senator John Sherman pushed for and the Senate approved the Sherman Act, which aimed to level the playing field for companies and safeguard the market. The US Supreme Court lauded the Act, which it dubbed a "Charter of freedom" and which aimed to protect core Republican beliefs of free business in the US. It was widely regarded as the "Magna Carta" of business law.

Puts faith in the formal mechanism that facilitates cooperation amongst businesses offering similar products or services. A trustee is appointed by the numerous owners of these commercial organizations to look out for everyone's best interests while they merge their interests into one company, much like a cartel. John Rockefeller's Standard Oil Co.'s attorney S. C. T. Dodd established a trust in 1882 so a small group

³⁸R.S Naidu, "Cartels Vis-a-Vis Competition Law: Judicial Analysis" 7 (1) NALSAR Law Review (2013).

of oil refiners could evade federal and state taxes and regulations while controlling supply and pricing.

The government finally passed the Sherman Act, after extensive debate, to prevent monopolies from dominating markets and to encourage competition while punishing those that harm it. The Antitrust Law, which essentially criminalized cartels, was enacted by the United States of America as the first nation to adopt such severe anti-competitive laws.³⁹ The fundamental Republican principle of free enterprise in the United States was the fundamental motivation for the Act. Any agreement, combination, or conspiracy that restricts trade is subject to strict regulation under the Sherman Act.⁴⁰ If a business has a monopoly, the Act makes it much more illegal for it to engage in unfair competition or deceive. A seminal decision that depends on Section 1 is *United States v. Addyston Pipe & Steel Co.*, which established the rule of reason.

Another notable case that the Supreme Court decided was *Hartford Fire Insurance Co. v. California*.⁴¹ recognized that "the Sherman Act applies to foreign conduct that was meant to produce and did in fact produce some substantial effect in the United States," as previously stated. The court here clearly recognized the "effects doctrine".⁴²

As a result of shifting political and economic winds, the Sherman Act became ineffective, prompting Congress to enact the Federal Trade Commission (FTC) Act and the Clayton Act, which aimed to further solidify the market. Mergers and acquisitions, which might damage competition or possibly lead to a monopoly if left unchecked, were not prohibited under the Sherman Act. To remedy this, Congress passed the Clayton Act, which outlawed a variety of abusive practices, including price discrimination, exclusive contracts, and certain forms of tying.

To include mergers that lessen competition in the market, exclusive dealing, tying agreements, and pricing discrimination between different customers with the goal of establishing a monopoly, the Clayton Act expanded its ban on anti-competitive behavior. The Act goes much beyond by addressing pre-monopoly challenges and

³⁹Suresh T. Viswanathan, *Law and Practice of Competition Act*, 2002 (Bharat Law House Pvt. Ltd., New Delhi, 1stedn., 2003)

⁴⁰William E. Kovacic and Carl Shapiro, "Antitrust Policy: A century of economic and legal thinking" 14 *Journal of Economic Perspectives* 43–60 (2000).

⁴¹ 509 U.S. 761, 769, 1993

⁴² *Hartford Fire Insurance Co. v. California*, 509 U.S. 761, 769, (1993)

focusing on certain antitrust issues. The United States v. Standard Oil and other cases heavily used the Clayton Act. In addition, there's the US v. American Tobacco lawsuit. During this time, the Supreme Court established guidelines for powerful corporations and the government brought many lawsuits against them. The Federal Trade Commission (FTC) was only a separate regulatory body when it carried out its duties under the Clayton Act.

European Union

Academics and bureaucrats in Austria originally proposed the notion of creating a competition law in the 1890s, long before the United States ever considered the subject. After the Great War ended, there was much debate about whether or not Europe needed a strong competition legislation to save its economy. The 1957 Treaty of Rome, which laid the groundwork for European Union competition policy, sought, among other things, to establish a mechanism to safeguard free competition inside the single market. Founded on "a highly competitive social market economy," the European Union "shall establish an internal market," as stated in Article 3(3) of the Treaty on European Union (TEU). The TFEU lays forth all the regulations regarding market competition in Articles 101–109.

Germany, Sweden, and Norway approved their first anti-cartel legislation in 1923, 1925, and 1926, respectively, before Europe became a single market. This is because, in the years between the wars, ideas of competitiveness were given fresh consideration, becoming unpopular throughout the latter half of the nineteenth and early twentieth century. European competition rules were mostly dormant after World War II and the Great Depression. The first European nations to enact antitrust legislation after WWII were Germany and the UK..⁴³

When the "European Coal and Steel Community" was established by the Treaty of Paris, the first "Community Competition Controls" were included. The 1957 Treaty of Rome established the primary provisions pertaining to Competition. It was at this meeting that the EEC was born."⁴⁴

⁴³ Anestis S. Papadopoulos, *The International Dimension of EU Competition Law and Policy* (Cambridge University Press, New York, 2010).

⁴⁴ Spence Weber Waller, "The Internationalization of Antitrust Enforcement" 77 *Boston University Law Review* 343 (1997)

One of the main objectives of the European Union is to establish a single market, and this can only be achieved via the unrestricted movement of products, services, money, and people within and between the member states and beyond national boundaries. Such issues may emerge if companies participate in trade practices that restrict competition and divide local markets. Preventing such a distorting of competition inside the common market is one of the primary obligations imposed on the community by the Treaty.⁴⁵

Article 101 makes it illegal for businesses to collude in any way that limits competition or impacts commerce between Member States. Partnerships and agreements that limit competition in any manner are subject to Article 101. It is immoral to work together to harm rivals by influencing consumer market conditions. That is incorrect; they should instead compete amicably. According to Article 101 of the EC Treaty, competition authorities may be worried about agreements between enterprises that operate in the same market.

3.3 COMPETITION LAW AND INDIA

3.3.1 EVOLUTION OF COMPETITION LAW IN INDIA

After India gained its independence in 1947, the country's competition laws began to take shape; under the British rule, economic power and wealth concentration were never considered, and no such laws existed. For over half a century after independence, Indian lawmakers mostly followed what is slang for "command and control" rules, regulations, and presidential directives since the nation had a difficult job ahead of it, people had great expectations, and resources were few.

Government regulation was stringent across the board in the economy. In an industrial setting, the government oversaw the distribution, size, pricing, and placement of limited financial resources. This was true in a plethora of significant domains. The rationale behind this rule was to stop the independent nation's riches from being frittered away and to make sure that everyone would benefit from them. Unfortunately, this resulted in market domination, and back then, government policies and programs greatly restricted free competition in the market.

⁴⁵ Copinger and Skone James, Copyright 1685 (Sweet and Maxwell, London, 15th edn., 2009) 1685

The 'Command and Control' strategy eventually began to have an impact on the national economy. Smaller competitors were unable to get into the market due to the monopoly of a few of large industrial companies. Here is where the MRTP Act of 1969 went into force. The transition from a command-and-control to a free-market economy began formally with the implementation of significant economic reforms in 1991. In order to ensure the well-being of its citizens, the state will do everything in its power to preserve a social order in which economic, political, and social elements guide all national institutions. The following, in particular, are to be secured by the state's policies: (Articles 38 and 39 of Part IV of the Indian Constitution, which incorporate the Directive Principles of State Policy).

- As much of the community's material resources as feasible should be distributed in a way that benefits everyone.
- It is important that the economic system does not cause people to become rich and powerful, as this would hurt everyone.

3.3.2 MRTP ACT, 1969

Historical development

Reducing economic inequity and limiting wealth concentration are two primary objectives of the government of independent India. These concepts aligned with the stated goals of the Constitution. In order to overcome this obstacle, India's market system and economic model were based on the Nehruvian Socialism Model. Nehru believed that development should be done so that everyone may profit, which is why the Nehruvian Socialism Model incorporated socialist and capitalist concepts. Using the mixed-economy paradigm, this idea aimed to achieve equitable and inclusive economic development. India, the Industrial (Department and Regulation) Act of 1951, was used by the government in the years after independence. Creating a governing body to monitor the expansion and compliance of a small number of large corporations was the primary motivation behind the legislation. The growth of these areas should be guided by national economic considerations as they impact the whole country. The federal government is aiming to license all new companies so that future expansion is planned in a balanced and prudent manner. One of the many reasons the Nehruvian model's goals were unfulfilled was that it allowed the government too

much power over how private enterprises used their investment money, which in turn lowered efficiency, stifled competition, and halted economic growth. Additionally, the Nehruvian model was more socialist in its approach to economic development, with "economic growth with social justice" as its aim. The government had failed to execute its constitutional agenda, which had led to a spiraling economy and stagnant development; in an attempt to institute the essential changes, it had established the Mahalanobis Committee.

Mahalanobis Committee (1960)

In order to study the income distribution gap and come up with strategies to close it, the government appointed "P.C. Mahalanobis" to head a commission on October 13, 1960. Finding that "the functioning of the planned economy has contributed to this growth of big companies in Indian industry" was the committee's final judgement in its report.

Public entities such as the Industrial Finance Corporation (IFC), the National Industrial Development Corporation (NIOC), etc., have provided financial assistance to the private sector of industry, allowing it to thrive. This assistance has been especially beneficial to big enterprises.

There is still an unjustified concentration of economic power in the private sector, in both its broad and narrow manifestations, according to the Committee, despite the numerous countervailing measures already mentioned, including industrial licencing, price and distribution controls, and the Companies & Industries Acts, among others. Our mission does not include proposing a strategy that combines economic development with a progressive decline of economic power concentration. In the grand scheme of things, the best course of action will be to increase countervailing measures to lower incidence and offset the effects of economic concentration.⁴⁶

In April 1964, the Monopolies Inquiry Commission (MIC) was proposed by the Mahalanobis Committee to "investigate into the extent of and effect of concentration of power in the private sector and the prevalence of monopolistic practices in India." Indeed, such was the intention of the MIC.

⁴⁶ Vijay Kumar Singh, "Competition Law and Policy in India: The Journey in a Decade" 4 NUJS Law Review 523 (2011)

Monopolies Inquiry Commission (MIC)

Following the 1964 recommendations of the "Mahalanobis Committee" report, the Indian government established the (MIC). The committee's focus was on studying "the extent of and effect of concentration of power in the private sector and the prevalence of monopolistic practices in India." The "Dasgupta Commission," whose given name was "Justice K.C. Dasgupta," oversaw the MIC. A major conclusion drawn from the commission's findings was that less powerful producers and distributors engage in restrictive tactics when dominant enterprises are able to use their positions to control output levels and pricing. Industrial permits were simpler to secure for large enterprises and industries to start up or expand their activities under the command and control regime. After the MIC found that more than 85 percent of industrial commodities were concentrated, the Indian government enacted the MRTP Act of 1969 to regulate economic power concentration in the country's industries. The MRTP Commission was later established to administer and execute the MRTP Act.

Hazari Committee (1967)

The licencing process of the IRDA 1951 was the subject of many discussion and worries. The Government of India appointed Dr. R.K. Hazari to head the Hazari Committee in 1967 with the express purpose of reviewing IDRA 1951's industrial licensing system. The Committee reiterated the previous commissioners' worries about the licensing system and its negative impacts, such as the disproportionate rise of a small number of big Indian companies and the harm they've caused to the whole economy. The results reached by the Committee were opposed to the ideals enshrined in the Constitution.

Dutt Committee (1967):

Subinal Dutt was appointed as the chairman of the Hazari Commission and the Dutt Committee by the Indian government to investigate the country's banking and licensing systems. The committee's 1969 report to the licensing authorities did not provide any particular suggestions to avoid monopolization or concentration. According to the research, the tactics really facilitated the expansion of mega-industrial complexes. What they fell short of doing was preventing a few of influential

companies from accumulating an overwhelming amount of wealth for the nation.

After considering the recommendations of many committees, the government of India introduced a bill to combat monopolies and restrictive trade practices in 1969; this bill eventually became law as the MRTP Act. The MRTP Act was crafted with a firm grasp of constitutional law. In order to carry out its mission of creating a fair and compassionate society, the government of India must establish and maintain a social order that is equitable in every respect, including but not limited to economics, politics, and social standing.

3.3.3 MRTP AND ITS EVOLUTION

The 1956 resolution, which placed an emphasis on progress, equality, and independence, was the subsequent landmark in industrial policy. Throughout those years, the government was heavily involved and controlled nearly every aspect of the country's economy. Companies were unable to operate in a free and fair market because the government controlled plant sizes, plant locations, prices across many industries, and the distribution of limited funds. Because of their management acumen and ability to acquire substantial funds, large corporate houses benefited from the government's licensing strategy.

The capacity to access the resources of financial institutions, such as banks, was also beneficial to the huge enterprises. Due to the lack of a proper system for issuing licenses, licensing authorities favored those who had already shown their ability via the accomplishment of large-scale commercial endeavors over those who still needed to do so. Since only a small number of corporations could secure licenses in advance, the outcome was an elitist accumulation of riches.

3.3.4 FACTORS RESPONSIBLE FOR MRTP

In accordance with the State Policy Directives, the Government was cognizant of its duty.⁴⁷ In 1960, when working on the third five-year plan's draft, the government wanted to discover how the preceding two plans had boosted national income and how it had been distributed to the people.

⁴⁷ Constitution of India; Article 39 (C) certain principles of policy to be followed by the State in the formulation of its policies. Article 39 (C) reads as follows "That the operation of the economic system does not result in the concentration of wealth to the common detriment."

The MRTP Act, 1969 was based on the findings of three main investigations and research.

The first research looked at the process for industrial licensing under the Industries (Development and Regulation) Act 1951. The committee in charge of the study was Dr. R. K. Hazari.⁴⁸ Some large Indian corporations grew at an inflated rate, according to the Committee's analysis of the licensing system's operation. It would appear that the Directive Principles were in conflict with this conclusion.

Professor Mahalanobis presided over a group that conducted research into the country's income distribution and levels in October 1960. As a result of the government's "Planned economy" concept, the Committee saw the rise of large corporations and recommended gathering data on all the different ways in which economic power was being concentrated.

In April 1964, the government established the Monopolies Inquiry Commission (MIC), with Mr. Das Gupta serving as the chairman of that third investigation.⁴⁹ In reality, MIC was appointed according to the recommendations made by the Mahalanobis Committee. The Committee was directed to examine monopolistic and restrictive trade practices, the degree to which private sector economic power is concentrated, and the effects of this concentration in everything except agriculture. Certain goods and sectors had a disproportionate amount of economic sway, according to the Committee's conclusions, which were announced in October 1965. The country's trade policies were very monopolistic and restrictive, and it was noted that a few of industrial companies had an outsized influence over many other companies.

After the Parliamentary Committee made revisions to the MIC-drafted law, it became the MRTP Act, 1969, and it took effect on June 1, 1970. The Directive Principles of State Policy, which were stipulated by the constitution, served as an inspiration for the Act. The MRTP Act drew heavily on a variety of statutes passed by lawmakers in a variety of countries. The United States' Sherman and Clayton Acts, the United Kingdom's Monopolies and Restrictive Trade Practices (Inquiry and Control) Act of

⁴⁸ The Committee emphasized the need to change the licensing system so as to reduce the concentration of economic power.

⁴⁹ V.D. Kulshreshtha, "Report of The Monopolies Inquiry Commission: An Evaluation" 8 Journal of the Indian Institute of Law 413-427 (1966)

1948, and the United States' Resale Prices Act of 1964 are all instances of such legislation. It was mostly inspired by two laws: the Federal Trade Commission Act of 1914 (as revised in 1938) in the US and the Combines Investigation Act of 1910 in Canada. The MRTP Act forbids unfair, monopolistic, and restrictive commercial practices in order to safeguard consumer rights and market competitiveness. A few of the many purposes of the Act are to promote healthy competition, honest dealings in the market, and fair play.

The main goals that the MRTP Act aimed to achieve are:

- Keeping economic power from becoming too concentrated for everyone. Monopoly control;
- Unfair trade practices;
- Restrictive trade practices;
- Monopolistic trade practices restriction

The Act has as its goal the protection and aid of consumers by the limitation or outright prohibition of monopolistic, restrictive, and unfair commercial practices.

Maximum material development via the distribution of economic resources nationally, reasonable and fair deals for customers, and free and unfettered interaction of market forces are the fundamental principles of the MRTP Act.

3.3.5 ECONOMIC REFORMS AND ITS IMPACT ON THE MRTP ACT, 1969

Despite its dissatisfaction, India joined the Liberalization, Privatization, and Globalization (LPG) regime. Industrial licensing, foreign investment, technology imports, pricing, public sector purchasing preference, small-scale sector reservations, the banking sector, and many other sectors saw significant policy alterations after 1991 under the L.P.G. policy paradigm.

Changes to the MRTP Act made it so that monopoly and size are no longer seen with bias. Additionally, only a select few industries are now required to get a license. Industry and commerce have been de-regulated, de-monopolized, de-canalized, and de-bureaucratized since the 1991 paradigm shift. Below, we have provided a concise

summary of the key aspects of changes in several sectors:

3.4 COMPETITION LAW AND POLICY IN INDIA

3.4.1 EVOLUTION AND DEVELOPMENT

The necessity to control market monopolies and encourage fair competition between firms was the driving force behind the establishment of the Competition Law. Regarding India's Competition Commission?

Originating under India's socialist economic system, the Monopolies and Restrictive Trade Practices Act of 1969 sought to limit monopolies regardless of their impact on the economy, predicated on the idea that monopolies are inherently bad. As a result of India's liberalized and globalized economy, the country's court system was obviously ill-equipped to handle the problems that would arise. The purpose of the 1969 Monopolies and Restrictive Trade Practices law was to prevent anti-competition activity, however the policy failed to do this for a number of reasons.

One of the main problems with the MRTP Act was that it did not provide enough relief for the complainants as the only power it allowed was to "cease and desist" from the allegedly monopolistic, restrictive, or unfairly restrictive trade practices. In the event of a breach of the MRTP Act, no fines or penalties are to be imposed.

Achieving technical dynamism and worldwide competitiveness requires enterprises to be nimble enough to respond to the ever-changing external circumstances of the contemporary industrial world, according to the Government's Industrial Policy Statement, which was issued on July 24, 1991. Government policies and procedures should be tailored to the specific requirements of entrepreneurs if they are to be successful. This can only come to fruition if the government stops just controlling and starts helping and guiding by making all important procedures completely transparent and doing away with delays.

Following the World Trade Organization (WTO), there were several changes in international trade policy, and India chose to adopt them for its own profit. In its original form, India's competition law—the MRTP Act—had been in place since 1969, but it was unable to handle the problems that liberalization and globalization brought.

Since laws evolve throughout time, there can't be one set of rules that applies everywhere. This is in accordance with the first premise of jurisprudence. It is essential to consider India's unique requirements while learning from the experiences of other nations while making laws in India, because of the country's diverse cultural heritage. As a result of all the new connections happening throughout the world, the Indian economy was changing from a protected to a liberalized free market model. In response, the government of India established the Expert Group whose mandate is to assess current requirements.

With the aim of examining anti-competitive activities, the impact of mergers and amalgamations on competition, and the relationship between trade and competition policy in India, the Ministry of Commerce, Government of India established an Expert Group (the "Group") in 1997. A former member of the MRTP Commission⁵⁰, A leader posing as "Dr. S. Chakravarthy" guides the gathering. In 1999, the report was sent to the Ministry by the committee. The report recommends the establishment of a regulatory body to keep an eye out for and eradicate any anti-competitive practices. Policies, concepts, and enforcement actions pertaining to competition must also be coordinated. Detailed in paragraph 1.5. of the study are the proposals for "a new Competition Law... be designed and drafted incorporating the suggestions made." The research continues by stating that the principles of competition should be publicly announced and that the proposed law should serve as a powerful instrument to foster and maintain market competition, ultimately benefiting consumers and society as a whole.⁵¹ "The MRTP has become superseded in the light of international economic developments and there is a need to shift our emphasis from curbing monopolies to promoting competition," said the then-Indian finance minister in his budget statement on February 27, 1999.

Raghavan Committee (1999)

"Advise the government of India on a suitable, modern legislative framework for antitrust law." According to the government-appointed high-level committee in October 1999, its mission was to "advise a modern competition law for the country in line with international developments and to suggest a legislative framework which

⁵⁰ S. Chakravarthy, "New Indian Competition Law on the Anvil", RGICS Working Paper, Series No. 22, (2001) available at: <http://www.rgics.org/pdf1/wpn-22.pdf> (Last Visited on June 4, 2021)

⁵¹ JayantKumar and Abir Roy, Competition Law in India 176 (Eastern Law House, Kolkata, 1st edn., 2008).

might entail a new law or appropriate amendments to the MRTP Act." Since the MRTP Act was insufficient to handle the complex issues presented by competition, the Raghavan Committee recommended its amendment.

They suggested starting with new legislation to solve these issues. The Competition Act, 2002 was enacted as a consequence of the tenth five-year plan.

To guarantee that all participants in the Indian market may engage in lawful commerce without hindrance, to safeguard consumer interests, to encourage healthy competition, and to eradicate anti-competitive practices, the Competitive Commission of India (CCI) was established by the Competition Act of India (CCI). With its 2007 approval by Parliament, the Competition (Amendment) Act updated and corrected many mistakes in the 2002 Competition Act.

In order to review appeals of decisions issued by the Competition Commission of India (CCI), a new entity called the Competition Appellate Tribunal (COMPAT) was formed.

The need for a National Competition Policy was acknowledged during the Tenth Plan's mid-term evaluation as a means to quicken economic advancement, enhance people's quality of life, and foster national pride and self-esteem.

Kelkar Committee (2007)

As part of the Eleventh Plan's preparation, the Planning Commission formed a Working Group on Competition Policy to ensure that specialists from the public and private sectors were adequately represented.

At the same time, the MCA had asked the CCI to put up a Competition Policy Consultation Paper. " Consequently, the CCI formed an Advisory Committee under the leadership of "Dr. Vijay Kelkar," with "P.G. Mankad" presiding over a subcommittee. 90 Competition policy at the national level, advocacy for competition, and CCI-sectoral regulator collaboration are the focal points of the eight parts that comprise the Working Group's Report.

By September 2007, the CCI Advisory Committee had decided to utilize the Working Group's conclusions as the Final Draft Consultation Paper on Competition Policy.

Committee on National Competition Policy and Related Matters (2011)

The MCA formed a committee to create the National Competition Policy and other pertinent matters. The National Competition Policy (NCP) sought to preserve and encourage competition in the home market in order to enhance efficiency, innovation, and consumer welfare. Additionally, it sought to create and maintain a robust competition culture across the nation, standardize competition-related policies, laws, and procedures across all tiers of government, guarantee competition in regulated industries, set up a system for the CCI and sectorial regulators to work together, and eventually create a unified national market.

3.4.2 COMPETITION LAW

In 2002, in reaction to many studies that pointed to a time of change in the Indian economy, the government established the Competition legislation; however, it was not applied until May 2009. A company's misuse of power over another, anti-competitive agreements between enterprises, and "combinations" (such as mergers, amalgamations, or acquisitions of control) were the three primary concerns that the legislation sought to address. The MRTP Act failed in part because it failed to address unfair business practices.

"An Act to provide, keeping in view of the economic development of the country for the establishment of a Commission to prevent practices having adverse effect on competition, to promote and sustain competition in markets, to protect the interest of consumers and to ensure freedom of trade carried out by other participants in markets, in India, and for matters connected therewith or incidental thereto," according to the Act's preamble.

It wasn't until 2009 that Sections 3 and 4 were verified and put into force, even though the Competition Act of 2002 was approved in 2002. The first orders made under Sections 3 and 4 were not publicized by the Commission until February 2010. Sections 5 and 6, which dealt with mergers and acquisitions, were further delayed because two versions of the implementing regulations were announced and then withdrawn in response to considerable criticism. The merger clauses were finally put into effect in June 2011, after the notice of a third set of regulations in May 2011. The new law gives the Competition Commission, not the government, the authority to rule

on mergers and abuse of dominance, the legal equivalent of merger tax provisions in the previous law, the MRTP Act of 1969. The Competition Commission of India has the authority to reverse or halt a merger, or to request changes that would enable it to go forward while addressing competition concerns. Any anti-competitive combination or action by a foreign company with an Indian base is expressly within the purview of the Competition Act. India may now take legal action against international cartels, similar to what the European Commission has done against Microsoft for selling Windows as a bundle with third-party programs.

The intent of the Indian Competition Act was to "prevent the practices that are having adverse effects on competition, to promote the healthy competition the market by protecting the interests of the consumers and lastly to safeguard the freedom of trade carried on by other participants in the market."

Competition is the bedrock of technological progress, "abuse of dominant position," and "anti-competitive agreements," and the Indian Competition Act is based on this principle. With the ability to "a) operate independently of competitive forces prevailing in the relevant market; or (b) affect its competitors or consumers or the relevant market in its favor," an Indian business is said to have a "dominant position" in the market. The Competition Act of 2002 provides the basis for this term.⁵²

In the case of *Belaire Owner's Association v. DLF Limited*,⁵³ the two terms stated above were interpreted by the Competition Commission of India. The term "abuse of dominance" is not defined in the majority of antitrust statutes. However, the reasons that contribute to abuse of power have been listed in several competition statutes.

Under Section 19, "investigation into certain agreements and dominant position of enterprise" is mandated.⁵⁴ Investigations investigating allegations of corporate dominance abuse are within the purview of the Commission. The following factors must be considered by CCI when deciding whether an agreement significantly harms competition:

- a. Improving production or distribution of goods or provision of services;

⁵² Competition Act, 2002, s.4 (2)

⁵³ Case No. (19/2010)

⁵⁴ Competition Act, 2002, s. 19.

- b. Promoting technical, scientific, and economic development through the production or distribution of goods or provision of services;
- c. Driving existing competitors out of the market;
- d. Accumulating benefits to consumers;
- e. Creating barriers to new entrants in the market;
- f. Foreclosing competition by hindering entry into the market.⁵⁵

Once the Commission receives a reference or becomes aware of information received under Section 19 regarding anti-competitive practices, it has the authority to instruct the Director General (DG) to conduct an investigation into the matter. The case must reach a *prima facie* point where it is determined that a case exists. If there is no initial evidence or case, the investigation will be ended and the relevant information will be sent to the appropriate party.

When it comes to addressing instances of patent abuse in reality, the competition law offers minimal protection and has limited implementation.

3.5 INTELLECTUAL PROPERTY LAWS

3.5.1 EVOLUTION

God gave man a marvelous tool—his brain—and Mother Nature gave him the earth's plentiful biological and physical resources. A combination of mental effort and the use of these raw materials allowed man to begin building his own universe. Imagination and creativity are also gifts to mankind. He has been making a wide range of things to suit his own requirements, ease, and convenience, drawing on his creative side in the process. In his day, all of his works and innovations were considered to be part of the public domain. These characteristics were shared. Without limitation, reserve, or compensation, everyone might make use of and replicate these innovations and works of art. But as time went on, the worth and significance of these inventions became apparent. In these productions, the commercial factor began to play a major part. Everything that a person's mind concocted or developed was

⁵⁵ Competition Act, 2002, s.19(3)

considered their intellectual property by the late 20th century. The owner's acknowledged right to these attributes is termed an Intellectual Property Right (IPR). To safeguard these property rights, a new body of legislation known as Intellectual Property Right Laws was passed. Patents, industrial designs, copyrights, trademarks, and other forms of intellectual property legislation all serve to safeguard their respective owners.

Copyrights and patents are examples of physical forms of intellectual property rights, but ideas and concepts are more abstract and subject to other types of protection. What we call "creative works" or "inventions" are really protected "intellectual property rights" (IPRs). Its primary source is the "intellect" and the value it produces. The goal is to safeguard the value that is associated with an idea's inception. Laws pertaining to the ownership, use, and exploitation of ideas and creative work are known as intellectual property laws. A wide variety of legal frameworks exist for the purpose of establishing ownership rights over conceptual, non-physical, or intangible assets (IP). It is often defined as an immaterial good whose worth is predicated on an abstract concept or set of concepts rather than any hard physical evidence.

The most prevalent form of IP Most rights are understood to pertain to private property. Rather than securing ownership of the intangible, abstract "res" of an idea, intellectual property rights often govern the use of concrete examples of that idea. Intellectual property systems safeguard concepts by securing the right to create and manage material representations of those concepts. A more substantial legal requirement would be necessary to adequately provide such protection to a thought that arises from one's mind. Legal protection for an item develops out of the concept of property, which includes possession, ownership, and other associated legal relationships. Generally speaking, the goal of law is to safeguard movable, tangible, and commodity-type property. One definition of intellectual property is ownership of ideas and the means by which they are expressed. It is an original work of art, such as a poem, a design, or a technical advancement.

When compared to other types of property, intellectual property stands out due to its intangible nature, which means it cannot be physically defined or recognized. To be protectable, it has to be stated in a form that can be easily discerned. In general, it includes four different kinds of intangible property, which are called "intellectual

property": patents, trademarks, copyrights, and trade secrets. The definition and scope of intellectual property are always changing to include newer forms. Intellectual property has recently expanded to include safeguards for secret knowledge, plant variety protection, semi-conductors, and integrated circuits.

Throughout the annals of scientific thought, there was a period when the notion that methods and concepts that revolutionize human existence may likewise become property was held in high esteem. In order to provide intangibles with this level of protection, the legislation has to change. The origins of intellectual property protection can be traced back to the early days of state-sponsored efforts to safeguard distinctive handicrafts made by particular artisans. These efforts included developing systems to distinguish between the structural and design features of different handicrafts.

3.5.2 THE CONCEPT OF PROPERTY

Different types of property have been established according to established scientific principles and common sense.⁵⁶ Corporeal property and incorporeal property are the two main categories of property in general.⁵⁷ The actual existence of property is the basis for this categorization. In a broader sense, physical presence is also known as corpus or material form. The term "corporeal property" refers to assets that can be physically held and have a tangible, physical presence. Any kind of property that cannot be physically held because it lacks a corpus or other physical presence is considered incorporeal property. Corporeal property, in this context, refers to tangible assets. This kind of property includes things like land, buildings, and chattel. "Incorporeal property" refers to assets that do not exist in a tangible, physical form. The two main categories for this kind of property are: Intellectual labor gave rise to property encumbrances such as mortgages, leases, and property over intangible goods.

Patents, trademarks, copyrights, designs, etc., originate from this quality in immaterial objects. The term "intellectual property rights" is often used to describe this kind of intangible asset. In reality, there is an additional way to categorize property: tangible and immaterial. Tangible property is defined as that which is physically present and can be seen by the human eye. Real property includes things like land, buildings,

⁵⁶ Holyoak And Torremans, Intellectual Property Law(Butterworths, London, 2nd edn.,1998)

⁵⁷ NS Sreenivasulu, "Intellectual Property Rights: A Master Glance"1 MIPR 185 (2007)

chattels, and the like. Intangible property is defined as something which cannot be seen with the naked eye. Assets that cannot be physically touched or measured include things like leases, mortgages, and intellectual property rights like patents, copyrights, trademarks, and the like. Both of these categories have certain commonalities and relationships. Given the parallels between the two types of property, it is reasonable to assume that tangible property is that which can be seen by sight and touch. This includes things with a corpus or material form. In contrast, intangible property is not visible to the naked eye since it lacks a corpus or physical form.

Every kind of property right has commonalities. Rights of exclusive ownership are, in most cases, the exclusive legal rights to use a certain piece of property or piece of information. Those who own these rights, whether individuals or businesses, have the power to control how their property is used and to prevent others from enjoying its advantages. The fact that rights cannot be taken away from their owners in any way suggests that people with rights may freely sell or otherwise transfer them to another party.⁵⁸ This makes it quite obvious that these entitlements are distinct from inalienable rights like the right to exist or to nourishment. However, whereas IP rights are inalienable in general, this quality is time-bound for rights such as patents. The relevant information reverts to the public domain after patent rights expire, making it accessible to everyone and making individual appropriation impossible.

Although there are certain similarities between real and intellectual property rights, there are also some key distinctions that justify treating the two categories of property rights independently. There is usually a fixed amount of resources accessible, and real property rights essentially distribute claims over those resources.

Additionally, it is not common to be able to utilize a physical item in more than one location at once. Knowledge, however, is not limited by the availability of physical items; it may be used in an infinite variety of contexts. In a formal sense, no one use restricts the use of any other. Even if it's physically impossible for two individuals to live in the same home, it's theoretically feasible for several people to take the same medication formula without officially prohibiting each other's usage.

⁵⁸ Some limited exceptions as to Moral Rights etc.

3.5.3 PROTECTION OF INTANGIBLE PROPERTY

Both the idea of protection and the items intended to be protected were far simpler in earlier times.⁵⁹ Total New ideas were sparked by the industrial revolution that occurred in Europe in the late 1800s. Under this view, intellectual property does not consist of tangible things but rather of ideas, designs, patterns, abstract sorts, or collections of ideas.⁶⁰ Since the development of printing, photography, and other technological advances necessitates the legal protection of novel forms of artistic and literary works. All of these undertakings need exclusive rights and protection. The jolting array provided some legal protection, so the creator should eventually get his money back. Consequently, it became quite evident that intellectual property rights include the ownership of the tangible manifestations or tokens of the idea(s) and the corresponding financial assets for a certain duration. By preventing anyone from duplicating his work or infringing on his patent, he had made sure that they couldn't compete with him.⁶¹

The idea of a transitory legislative monopoly on such ideas and breakthroughs so emerged. Officials were in favor of monopoly when it came to protecting new and innovative ideas. During the monopoly period, no one could take use of the creator's work. Once that time frame ended, the concept would be considered part of the public domain. During that period, anyone might adopt and use that concept or innovation. It was contended that society would reap the benefits in this manner. The current framework protecting intellectual property was built on top of this.

Copyright, patents, designs, trademarks, and a plethora of other related rights are all part of the larger field of intellectual property law. It grants rights to the owners of ideas that have been turned into property, protecting the rights of people and corporations that have done this.⁶²

Many trademarks and service marks are also protected under intellectual property law.⁶³ As the emphasis shifted from tangible to intangible forms of property, the rule

⁵⁹ Roger Schechter and John Thomas, *Intellectual Property: the Law of Copyrights, Patents and Trademarks*7 (West Group Washington, 2003)

⁶⁰ Adam D Moore, "Intellectual property, Innovation, and Social Progress: The Case against Incentive Based Arguments" 26 *Hamline Law Review*57(2003)

⁶¹ Jeremy Phillips and Alison Firth, *Introduction to Intellectual Property Law* 19 (Oxford University Press, New York, 2005)

⁶² Frank H Easterbrook, "Intellectual Property is Still Property"13 *Harvard Journal of Law and Public Policy*108-118 (1990)

⁶³ Roger Schechter and John Thomas, *Intellectual Property: the Law of Copyrights, Patents and Trademarks*7 (West Group

of intellectual property was expected to grow. Intellectual property, like other forms of property, has a foundation and an overarching goal. The narrow focus and short lifespan of intellectual property tend to discourage the growth of wealth, and it lacks the laborer/capitalist hierarchy seen in Marxist theory. Contrarily, compared to other types of property, it is a neutral institution. Instead of protecting the intangible, abstract concept itself, intellectual property laws protect the material manifestations of ideas.

The value of intellectual property, as opposed to tangible goods, is based on concepts rather than real creations. This might be the basis for a universally recognized definition of intellectual property.⁶⁴ On top of that, something extra unique has to be present. Intellectual property's object, or res, may be something completely novel that no one else has ever heard of. Total When a notion is owned, what counts is that it is considered to be generally unknown, not necessarily how unique it is. The law recognizes a number of property-related agreements that constitute "bundled" rights. Objects of physical possession are easily identifiable, as mentioned before. Keep in mind that there are certain unique features to property relationships as they emerge in different communities and civilizations. It follows that "intellectual property" probably refers to a broad variety of legal systems that provide ownership rights to "ideal, immaterial, or intangible objects."⁶⁵

The package of rights does, however, include some limitations. To start, these rights always center on the rest's material forms. The fundamental premise of all types of intellectual property is that solely conceptual notions do not have any inherent right. Instead, their monopoly extends solely to the physical manifestations of abstract ideas. Physical embodiments are not immune to the constraints placed on IP rights. We have a hard enough time figuring out what rights should be granted to physical things like water or minerals as it is to decide what rights should be granted to intangible intellectual property like books, ideas, and trade secrets. Legal matters pertaining to copyright, patents, and trade secrets are infamously complex due of this matter. Just a side note: patents are SUPER important to property rights. If they were

Washington, 2003)

⁶⁴ Sherman and Bently, *The Making of Modern Intellectual Property Law: The British Experience* 2-13, (Cambridge University Press, New York, 1999)

⁶⁵ Michael Madow, "Private Ownership of Public Image: Popular Culture and Publicity Rights" 81*California Law Review* 125 (1993)

to be abolished, all property rights would be utterly destroyed. In today's increasingly interconnected knowledge-based capitalist world, protecting one's intellectual property is crucial to building wealth. "Piracy" refers to the illegal taking of someone else's intellectual property, often known as information theft., is becoming increasingly common as a consequence of both the increased importance of information in our society and the tremendous improvement in technology for managing information.

3.5.4 HISTORICAL PERSPECTIVE OF INTELLECTUAL PROPERTY AND RIGHTS

Many people think that the system of intellectual property first arose in northern Italy during the Renaissance, therefore the concept has been around for quite some time. A statute issued in 1474 in Venice was the first to systematically attempt to safeguard discoveries by granting an exclusive right in the form of a patent. Around the same time that Johannes Gutenberg developed the printing press and movable type (around 1450), the world's first copyright regime was also established. Rapid urbanization, transportation network development, wealth accumulation, and international trade were all accelerated by the introduction of new production methods towards the end of the nineteenth century, which in turn triggered extensive industrialization. Many nations' present IP laws originated with the rise of nationalism, more centralized governments, and new industrialist ideas.

With the establishment of the Berne Convention for the Protection of Literary and Artistic Works in 1886 and the Paris Convention for the Protection of Industrial Property in 1883, the International Intellectual Property system began to take form around this time as well. Historically, the idea behind IP has been that when people are rewarded with their innovations and creative works, it encourages them to keep inventing and creating, which boosts the economy.

Ideas and information have grown in importance as components of commerce throughout time, especially in the modern business paradigm. The amount of time and effort put into invention, creativity, research, design, and testing determines the worth of high-tech items and novel medications. The knowledge and creativity included in films, music records, books, computer software, and online services are what drive

sales, not the physical materials required to create them. Things like novel plant kinds and brand-name apparel have a greater share of innovation and design in their worth than low-tech commodities did in the past. People who have created something deserve the right to stop others from making use of it. Intellectual property rights describe these protections.

3.5.5 GENESIS OF PATENT LAW

Intellectual property is not a new concept; in fact, many people think it was developed in northern Italy during the Renaissance. In 1474, a statute was established in Venice that granted an individual the first exclusive right as part of a systematic attempt to preserve discoveries via patents. Around 1450, when Johannes Gutenberg built the printing press and movable type, the world also saw the establishment of its first copyright regime. Urbanization, transportation network development, wealth accumulation, and international trade were all expedited by the broad industrialization that began with the emergence of new production methods at the end of the nineteenth century. Many nations' present IP laws originated with the rise of nationalism, more centralized governments, and new industrialist ideas.

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3.5.6 PATENT LAW IN INDIA

In 1856, Act VI became the first patent law in India. The law's authors hoped that by making it easier for inventors to share their trade secrets, they may spur the development of novel, practical manufacturing processes. Since the Act had been passed without the sovereign's consent, it was later revoked by Act IX of 1857. Novel "exclusive privileges" law was established in 1859 as Act XV of that year. The primary changes from the previous law were the following: the priority period was extended from six to twelve months, and exclusive rights were granted only to innovations that were found to be valuable. Importers were not considered inventors under the Act. Based on the 1852 Act of the United Kingdom, the 1856 Act made a few changes, such as letting assignees apply in India and considering earlier public usage or publication in either India or the UK to determine uniqueness.

Protecting designs has been a part of British law since at least 1842, but the Act of 1859 only applied to inventions. In 1872, the 'Patterns and Designs Protection Act' (Act XIII) was enacted to fill this gap. Any substance or object of production that incorporates a novel and unique pattern or design is now considered a "new manufacture" according to this Act, which revised the 1859 Act. The uniqueness of inventions that were exposed at the Exhibitions of India previous to their protection application was further adjusted in 1883 by Act XVI of 1883 to the Act XV of 1859. Such submissions were given a six-month extension from the date of the Exhibition's opening to be submitted. Following changes made to UK law, new laws were created in 1888 to consolidate and improve the laws pertaining to inventions and designs. Substituting all earlier patent and design laws, the Indian Patents and Designs Act, 1911 (Act II of 1911) was enacted in 1911. The first-ever Controller of Patents was established by this Act to oversee patent administration. To facilitate the establishment of priority-securing reciprocal agreements with the United Kingdom and other nations, this Act was revised in 1920. Additional changes were made in 1930 to include, among other things, language about the extension of patent terms from 14 to 16 years, the ability of the Controller to correct patent registrations, the use of inventions by the government, and the award of secret patents. Another change was made in 1945 to allow for the submission of full specifications within nine months

following the first modification and the filing of tentative specifications within three months. There was a belief after independence that the Indian Patents and Designs Act, 1911 was failing to achieve its goal. Major shifts in the country's political and economic climate made it seem like a good idea to pass a thorough patent legislation.

In 1949, the Indian government appointed Justice (Dr.) Bakshi Tek Chand, a retired judge from the Lahore High Court, to head a commission that would examine the country's patent laws and regulations and make sure they served the country's interests. On August 4, 1949, the Committee presented its interim report, which included suggestions to change sections 22, 23, and 23A of the Patents & Designs Act, 1911 in accordance with the UK Acts of 1919 and 1949, and to avoid the exploitation or misuse of patent rights in India. In 1950, the 1911 Act was revised (Act XXXII of 1950) to address the Committee's recommendations on the operation of inventions and forced licensing/revocation. Surgical and curative device inventions, as well as patents on food and medicine, insecticides, germicides, fungicides, and processes for generating substances, were amended in 1952 to establish obligatory licensing under Act LXX of 1952.

Notification from the Central Government also made the required licensing accessible. In 1953, the Committee's suggestions were used to present a bill in the Parliament, which became known as Bill No.59 of 1953. The dissolution of the Lok Sabha, however, caused the bill to expire. The Indian government asked the Justice N. Rajagopala Ayyangar Committee to look into the possibility of updating the patent law and provide recommendations in 1957.

In September 1959, the Committee handed in its findings, which was split into two halves. Part one covered patent law in broad strokes, while Part two provided a clause-by-clause analysis of the now-defunct 1953 statute. Both the problems with the patent system and potential legal solutions were covered in the first section. In spite of its flaws, the committee recommended keeping the patent system. It was on the basis of these recommendations for substantial legislative reforms that the Patents Bill, 1965 was introduced. The Lok Sabha considered this measure on September 21, 1965, but it never passed. After a revised measure was presented in 1967 and sent to a Joint Parliamentary Committee for review, the Patents Act, 1970 was enacted based on the Committee's final recommendation. In terms of patent law, this Act superseded and

replaced the 1911 Act. But designs were still subject to the 1911 Act. The Patents Rules, 1972 were published on April 20, 1972, which brought into action most of the provisions of the 1970 Act. Up to December 1994, this Act was unchanged and remained in effect for over 24 years. On December 31, 1994, an ordinance was passed to amend the Act; however, after six months, it was no longer in force. Afterwards, in 1999, still another ordinance was passed.

The Patents (Amendment) Act, 1999, which took effect retroactively from January 1, 1995, succeeded this ordinance. Applications for product patents in the categories of agrochemicals, medicines, and pharmaceuticals were made possible by the modified Act, even though such patents were previously prohibited. Nevertheless, such requests were only to be reviewed until December 31, 2004. The applicants, meanwhile, may be granted Exclusive Marketing Rights (EMRs) to sell or distribute these items in India, provided that they meet certain requirements. Act 38 of 2002, the Patents (revision) Act, made a second revision to the 1970 Act. After the old Patents Rules, 1972 were superseded by the new Patents Rules, 2003 on May 20, 2003, this Act became effective. The Patents (modification) Ordinance, 2004 introduced the third modification to the Patents Act, 1970, and it took effect on January 1, 2005. The Patents (Amendment) Act, 2005 (Act 15 of 2005) superseded this Ordinance on 4th April, 2005; it went into effect on 1st January, 2005.

The history of the law is necessary to understand its present status and its reasons, thus one must know it to compare the two laws. Competition law began in Roman times. The authorities of that period made sure that society's vital commodities were distributed equitably and not concentrated in the hands of a few to avoid chaos if the social equilibrium was broken. Industrialization eventually made this important. Competition legislation affects consumers' basic rights. Popular demand changed the Indian government's economic policies. After independence, there was command and control to protect people's rights, then liberalization.

Intellectual property rules are new to India's legal system and were a gift from the UK to benefit the monarchy and its inhabitants. India's intellectual property law has changed dramatically since entering international forums and having to alter its policies to meet global standards.

CHAPTER 4

INTERFACE OF COMPETITION LAW AND INTELLECTUAL PROPERTY RIGHTS IN THE REGULATION OF SEPS AND FRAND

4.1 INTELLECTUAL PROPERTY LAWS AND COMPETITION LAWS

Although competition and intellectual property laws have different origins and enforcement organizations, they are often considered complementary economic policy instruments. Both legal systems want efficient resource usage.

Protecting intellectual property rights promotes innovation, which boosts economic development and improves goods and services. It enables innovators to temporarily exclude others from enjoying their new information and the income from selling items and services that use it. In exchange for their research and innovation costs, the law grants inventors or intellectual property holders a brief monopoly.

However, most people have always believed that competition legislation is a crucial tool for preventing unfair business practices. enforcing policies that harm competition, to avoid monopolies and abuses of power, consumer-beneficial optimal resource allocation leading to reasonable pricing, expanded selection, and improved quality.⁶⁶ This safeguards intellectual property rights (IPRs) from being unduly amplified, exploited, or expanded in a way that harms competition. Promoting innovation as a competitive advantage is central to competition law's mission of enhancing consumer welfare.⁶⁷

There is a long and tumultuous history between competition law and intellectual property rights (IPRs). The system aims to strike a balance between competing or complementary systems and values, and there are several levels of market control.⁶⁸ When the rules of one policy are misunderstood or applied with prejudice, it might undermine the efficacy of the other policy. Deciding how to best safeguard invention while yet allowing for healthy competition is an issue for both approaches.

⁶⁶ Richard Whish, *Competition Law* 25 (Oxford University Press, London, 2012)

⁶⁷ Shubha Ghosh, "Intellectual Property Rights: the View from Competition Policy" 113 *Northwestern University Law Review Colloquy* 344-351 (2009)

⁶⁸ Gustavo Ghidini, *Intellectual Property and Competition Law: The Innovation Nexus* (Massachusetts, Edward Elgar Publishing Ltd, 2006)

Disagreements about the laws are not novel. From the early 1900s forward, "administrative and judicial doctrines, initially in the US and later in the EU, tended to amplify the tension between the use of IPRs and antitrust policy."⁶⁹

While intellectual property rights sought to provide incentives via regulating or restricting market access, competition policy once placed an emphasis on asset mobility and the ability to enter new markets with relative ease. This interface, however, is become more intricate. To begin, although intellectual property rights do their best to encourage product differentiation, which is beneficial in the market, they are often insufficient to create a sustainable monopoly. Second, the idea that IP laws provide a system of property rights wherein the acquisition of property rights is a competitive process is a common one. Third, rather than seeing competition as a source of raw hostility, we now view it as a driver of positive social change.

While intellectual property law achieves the same goal by establishing temporary monopolies, competition law optimizes social benefit by condemning monopolies, according to Jayant and Abir. The stipulation here is that monopolies should be economically significant and provided by intellectual property law. If this didn't happen, competition law may be able to undermine monopolies since it doesn't necessarily outlaw monopolies per se but rather certain ways of using or trying to get monopolies. "Despite the traditionally distinct evolution of the two fields, the Federal Trade Commission notes that the connection between IPRs and competition law has been a hot subject for the majority of the last decade. In light of the growing body of evidence linking IP rights and market competitiveness, regulatory bodies have issued new standards designed to clarify, illustrate, and reconcile the two domains' interplay. While this may lead to "a general lack of comprehension on both sides," anti-trust advocates should provide the framework for a practical reunification of the two sets of rules and values.

Although these goals are pursued by both systems, innovation, technological diffusion, and welfare may be negatively impacted by anticompetitive use of intellectual property rights (IPRs). The literature has also highlighted the importance of dynamic efficiency as a compelling goal of competition policy. Our nation's growth

⁶⁹ Steven D. Anderman and Hedvig Schmidt, *The Interface between Intellectual Property Rights & Competition* (Cambridge University Press, New York, 1st edn.,2007)

objectives are inseparable from competition legislation. It is debatable whether the pursuit of static efficiency—in which the competitive process seeks to accomplish short-term welfare goals without considering long-term trade-offs—can help economic progress.

Under emerging economies, the strategy on competition need to bolster the overall economic trajectory with a focus on efficiency targets that are subject to change. In its first ruling on the topic of competition theory, India's highest court has pointed out that the basic goal of competition law is to make markets more efficient by catering to customers' desires and requirements. One of the three benefits of perfect competition is dynamic efficiency, which encourages new behaviors; the other two are productive efficiency, which assures that resources are allocated appropriately, and dynamic efficiency, which reduces production costs. The aforementioned considerations are necessary for the successful implementation of competition laws.

The case of CCI vs. SAIL cited the objectives of competition law. When making its ruling, the Supreme Court refers to relevant laws from other nations, including those of the United States, the United Kingdom, and Australia. When deliberating contentious cases, Indian courts would undoubtedly look to these nations' examples of competition law for guidance.

There is a common misconception that intellectual property protection systems and competition laws are incompatible. As a result, researchers never stop trying to pin down whether IP protection and competition laws are mutually exclusive. The goal of competition law is to level the playing field in the market by dismantling monopolies, whereas the purpose of intellectual property law is to create and safeguard monopolies. Each of competition law's stated goals—the protection of consumer welfare and the economic independence of market participants—must be respected. Both would be deprived of any motivation to innovate and provide better goods and services. Overall, society would suffer since intellectual property (IP) only ensures competition by protecting actual distinctions.

According to Oliveira, "since the goal of intellectual property is to encourage inventions that will Similar to competition policy, its ultimate purpose is to increase welfare by improving circumstances for consumers in terms of price, quality, and

variety of items accessible to them. Because of its incessant focus on individual rights, intellectual property law was destined to clash with competition law's efforts to limit such rights.⁷⁰

Intellectual property (IP) and the rights granted by IP law has many people wondering how the recently passed Competition Act in India may affect the market. In the case of *US v. General Electric Company*, even the nation's highest court acknowledged this concern. It occurred when it was pointed out that "a breach of antitrust laws may result from the misuse of the power implicit in the grant of a patent." Due to the vagueness of the matter, the situation in India is now uncertain.

There is room for confusion since competition laws and intellectual property laws are not only functionally separate but also conceptually different, creating apparent tensions between the two. Legislation aimed at promoting competition aims to eradicate monopolistic practices, whereas intellectual property serves to create a temporary one. They seem to be hostile at first glance.⁷¹ Although most industrialized nations now view intellectual property rights and competition policy as complimentary parts of their industrial policy, both aim to benefit society as a whole and recognize innovation as a powerful tool for social improvement. However, emerging countries have conflicting views on how to approach the completion strategy. One of the trickiest disagreements in competition law is the intersection between IP laws with competitive difficulties. With the proliferation of monopoly rights abuses brought about by tremendous technical progress, there is a pressing need for further foundational research on the interplay between IP and competition law.

India has seen a dramatic rise in the number of competition litigation involving intellectual property rights in recent years. This trend, however, is not exclusive to the US or EU; the UK has also seen its fair share of FRAND and Standard Essential Patent disputes, whereby parties have disputed jurisdiction and the nature of the relevant competition. After recognizing the "conflict of Competition Law and IP Laws," the Raghavan Committee asserts in paragraph 5 that "All forms of intellectual property have the potential to raise Competition Law issues," indicating their

⁷⁰ VermaRuchi and Shanya, "Clash between Intellectual Property Law and Competition Law: A Critical Analysis"1 RGNUL Student LawReview 149-166 (2017).

⁷¹ Jain Shashank and Tripathy Sunita, "Intellectual Property and Competition Laws: Jural Correlatives" Journal of Intellectual Property Rights 224 (2007).

agreement. It doesn't matter whether this is true; intellectual property owners still can't use their exclusive rights to engage in certain commercial or industrial activities as a basis to impose monopolies or other market restrictions.

The promotion and reward of human ingenuity is undeniably aided by providing intellectual property right. The holder (the inventor) of this right has the authority to forbid others from profiting from their creations, but they are also obligated to prevent anti-competitive practices.⁷²

4.2 AREAS OF DISPUTES

Each has its own set of legislative goals and its own unique way of getting those goals accomplished. Since both legal systems aim to foster innovation as a means to increase economic progress, there is a lot of overlap between their respective purposes; nonetheless, disagreements may arise as a result of the different approaches taken by the two systems.

A licensee may be an existing or potential competitor of the right holder, but the owner or holder of the intellectual property right (IPR) has the power to place obligations on them.

Additional responsibilities and limitations on the licensee's ability to impose restrictions on its actual or potential competitors are imposed by competition law in cases where the licensee has a dominating position in the relevant market. The second component is difficult since market dominance may be caused by intellectual property rights.

Even while intellectual property systems are specifically addressed in most countries' competition laws, there are cases when these exclusions aren't enough to handle the overlap. Some areas where competition law and intellectual property intersect include as follows.:

4.2.1 LICENSING CONTRACTS

While examining the anticompetitive consequences of licensing contracts with exclusive or restricted restrictions, it is crucial to consider the role of competition

⁷² Raghavan Committee Report, 1999 High Level Committee on Competition Policy, Para 5.1.7.

policy in preventing the abuse of market power in relation to intellectual property rights (IPRs). The benefits of licencing intellectual property are often well-established. Streamlining the transmission of technical innovation and know-how in this way may be advantageous for companies with a competitive advantage. Using technology in tandem may improve both manufacturing efficiency and product quality. Some research suggests that companies may increase their investment in research and development (R&D) if they license patented technology, which would increase profits for IP owners. The inability to license one's expertise to others and the subsequent need to participate in direct manufacture and commercialization would adversely affect the well-being of inventors and owners of intellectual property rights.

4.2.2 PATENT POOLS

This may happen either directly amongst patent holders or through a joint venture that is established for the express purpose of managing the patent pool. Patent aggregators are impacts, both positive and negative, on competition. In most cases, when a licensor grants licensees access to its patented technology, it promotes healthy competition. They may make a ton of money while keeping new rivals out of the market. A small group of people will continue to control the technology if this happens. In the past, technical innovation has been driven by the United States and Europe, with Asian corporations following behind with increased membership in patent pools.

When patents that aren't legitimate are thrown into a patent pool or when patents that aren't complimentary end up competing with one other, the result might be anti-competitive consequences.⁷³ That "pooling helps companies earn a steady income, recover their investments and reduce risk, which could spur them to further research and innovation" is a compelling statement, according to Resnik, a famous author. As Krattiger and Kowalski pointed out, "patent pools to a 'potential double-edged legal sword'" might clarify patent complications, but they also bring up a lot of problems, particularly with opposition.

The per se rule is applied to patent pools globally, including in several countries such as the US, Canada, Japan, and Germany.

⁷³ Jayant Kumar and Abir Roy, *Competition Laws in India* 200 (Eastern Law House, Kolkata, 1stedn., 2008)

4.2.3 TIE-IN ARRANGEMENT

Next, we have another kind of restricting practice. In section 3(4)(a) of the Competition Act, 2002, this kind of agreement is defined. An IP holder may use a monopoly in one industry to undercut rivals in another, all while raking in the dough from the other. Even if a product isn't patentable, a licensee may nevertheless be required to buy it from the patent holder. This might potentially limit the prospects for other manufacturers. It is possible for a licensee to be prohibited from competing or dealing with products that are similar to the patentee's by an agreement.

As an example of a technique that often violates the antitrust laws, tying agreements legislation in the vast majority of countries throughout the globe. Some of the most prevalent ones are conditional sales and tie-ins. As part of tie agreements, a vendor may provide unusual terms. He is willing to sell a very desirable and practical product or service, but only if the customer agrees to purchase another, less important, irrelevant, or undesirable product or service, regardless of the buyer's desire for the second offering.

It is very clear that tying is banned according to Section 3 of the Indian Competition Act of 2002, Section 1 of the US Sherman Act of 1890, and Section 3 of the US Clayton Act of 1914. One such example is the case of *International Salt Co. v. US*⁷⁴, For the purpose of adding salt to the canned goods, International Salt rented a proprietary equipment known as the Salt mat. In order to lease the Salt mat, the client was also obligated to purchase all salt tablets from International Salt. Because of the unlawful nature of the tie, the Supreme Court rejected the settlement. The patents enable International Salt to prohibit the production, sale, or use of the patented machinery; however, the patents do not provide the power to prohibit the use or trade of unpatented salt. "The International Salt Company has contracted to eliminate competition in this salt market, which constitutes trade restriction. The company is nonetheless subject to antitrust regulations despite its patents.

Patent protection cannot be used to impede market competition, as is evident from the US Supreme Court Judgment. In a subsequent legal proceeding, "*Eastman Kodak v Image Technical Services Corporation*," a court ruled that "a tying arrangement i.e.,

⁷⁴ 332 US 392 (1947).

an agreement by a party to sell one product on the condition that the buyer also purchases a different (or tied) product, or at least agrees that he will not purchase that product from any other supplier-violates section 1 of Sherman Act, only if the vendor or seller has appreciable economic power or control in the tying product market." .

"To oblige a buyer to do something that he would not do in a competitive market," is the standard definition of market power. United States of America national "The seller's possession of a predominant share of the market ordinarily is inferred from such power," as per the ruling. In the case mentioned above, the Eastman Company was involved in the production and sale of photocopiers.

The company also managed parts replacement and after-sale maintenance. Only clients who used Eastman service or who repaired their own machines were allowed to purchase equipment from the company.

This included ISO, the party at odds in the legal battle, and restricted them access to necessary parts. Because of this limitation, the Eastman Company was able to control the service market while the ISO was unable to compete.

The Sherman Act forbids antitrust tactics, which is why the respondents sued. In order to establish that a tying arrangement is unlawful, the Supreme Court ruled that two things must be proven:

- 1) You can't compare the two items or services.
- 2) Both of the aforementioned items were sold by Eastman Kodak. There was sufficient proof of a connection between the selling of the service and the equipment, the court found.

Additionally The decision in Eastman Kodak Company v Image Technology establishes that specific evidence is necessary to establish a tying agreement.

To be more precise, it needs to be proven that the seller made a sale contingent upon the purchase of another good or service, that the goods or services in question are separate and not integrated, it was the seller's strong position in the market that

allowed them to enforce the tie-in, and it had a major impact on the transaction.⁷⁵

4.2.4 EXCLUSIVE SUPPLY AGREEMENTS

One customer is not allowed to purchase inputs from another client under an exclusive supply agreement. New competitors may have difficulties acquiring necessary inputs if dominant buyers get exclusive supply contracts. When employed against a monopolist, an agreement might be seen as an exclusionary practice that violates Sherman Act Section 2. One term for an exclusive supply agreement is "exclusive dealing." This term is used when a supplier or manufacturer demands that their buyer or dealer only deal in their items and not in things that are similar to them. Take, for example, a major pharmaceutical business that was forbidden by the FTC from entering into a 10-year exclusive supply agreement for a crucial component that would have allowed the suppliers to participate in the company's profits. According to the FTC's investigation, the pharmaceutical company in question prevented new entrants to the market by limiting them access to a key component via exclusive supply agreements. The result was a threefold increase in the price of the drug by the pharmaceutical company. Exclusive supply agreements are addressed under section 3(4)(b) of the Competition Act of India. In the matter of TELCO v. RRTA,⁷⁶ The parties' normal operating procedure stipulated that dealers may not purchase or exchange automobiles not made by the participant. It was in the public interest for other dealers to sell cars of other manufacturers in the same region, and other manufacturers may chose other dealers to handle their commercial vehicles, therefore the Supreme Court decided that exclusive dealership did not hinder competition. Limiting sales to TELCO commercial vehicles served the public interest and did not reduce competition. Due to the substantial expenditures made by the dealers and the exceptional after-sale support provided by the firm, exclusivity was considered crucial. So, if a dealership contract doesn't stifle competition or lead to a monopoly, it may not be really important.

4.2.5 CROSS-LICENSING

The term "cross licensing" describes a situation in which several parties exchange intellectual property rights.

⁷⁵ Eastman Kodak Company v. Image Technology, 504 'U.S. 451 (1992)

⁷⁶ 1977 SC 973.

The licensing of technology that is more of a replacement than a supplement could stifle competition. Cross licensing has anti-competitive impacts such as less innovation, higher costs, and less output, which may lead to occur when rival businesses work together via cross-licensing; otherwise, the rival businesses wouldn't exist, and the combined force might give them considerable influence in the market.

Restricting attempts to utilize an intellectual property beyond the limits permitted by intellectual property rights is the primary objective of competition regulation. Disagreement emerges when competition regulations prioritize fixed market access and intellectual property rights (IPRs) prioritize incentives for dynamic competition.

When designed to accommodate the needs of innovation, technology transfer, and information dissemination, the two regulatory regimes complement one other.

The current connection between the two systems is less resistant and has more tolerance. In their own unique ways, they both arrive to the same destination.

4.2.6 ABUSE OF DOMINANT POSITION

The ability of a company to act substantially independently of its rivals, clients, and, eventually, consumers, so hindering the maintenance of effective competition in a given market, is known as a dominating position." Some examples include: imposing predatory pricing or other forms of discrimination, restricting the supply of products and services, refusing to allow competitors entry to markets, and taking use of a dominating position in one market to enter or protect another.

A company has a substantial dominating position when it can influence the relevant market to its advantage or when it can act independently of the competitive dynamics that are present in the market. Over time, a business may gain a dominating position in its industry. Various variables, including technological advancements, entry hurdles, operational size, and more, impact this process.

4.2.7 REFUSAL TO SUPPLY LICENSE

Refusal to deal or supply is another kind of anticompetitive agreement that companies, particularly those with significant market power, engage in when they refuse to conduct business with their suppliers or customers. This denial affects the

market farther down the supply chain, as stated in the CCI's ruling in the *Re GhanshyamVij* case. Remember that no company is obligated to sell its products to a certain wholesaler or dealer. On the other hand, the Competition Act might apply to such acts in some instances; the specific circumstances surrounding each case will dictate whether this is the case.⁷⁷ Although there is no legal need to create competition, there is a prohibition against obstructing competition. It is a well-established principle of IP legislation that owners of IP are not obliged to provide licenses to others for the exclusive subject subjects that are protected by law. Even in monopolistic situations, this idea is usually believed to be valid.

The idea that IP law and competition law are complementary forms of legislation forms the basis of licensing law. The possessor of intellectual property rights has a temporary monopoly. The owner of a right can limit who may use their property, but he can't stop others from developing new technologies. An obvious illustration of this is the fact that IP encourages competition in the market. Now things start to get tricky since the *IMS Health* case specifically spells out three requirements that need to be met in order for this kind of rejection to be deemed an abuse of dominant position.

They are:

- (1) "That the denial of a license 'is standing in the way of creating a new product that could have demand from consumers.'"
- (2) That it lacks "justification" and
- (3) Because it "excludes competition in the secondary market" and prevents the production of new goods for customers, refusing to license a patented technology is anti-competitive.

It is a well-established principle of IP legislation that owners of IP are not obliged to provide licenses to others for the exclusive subject subjects that are protected by law. People often assume that this principle holds true even when one firm controls every piece of intellectual property in a certain industry. Private possessions. Choosing to go to the US Supreme Court early on in a matter unrelated to antitrust laws ⁷⁸,

⁷⁷ In *Re ShriGhanshyamDassVij* competition commission of India C. No. 68 of 2013

⁷⁸ Case C- 418/01, *IMS Health* [2004] ECR I-5039

Everyone has the inherent right to make their own decisions about how to use their property, independent of other influences. One of the most basic rights guaranteed by a patent is the ability to stop competitors from making use of the patented innovation. Given the relationship between intellectual property rights and antitrust laws, one can wonder whether this kind of stipulation belongs in the patent system.

Legal precedent in the United States and the European Union establishes that patent licensing refusals constitute a violation of competition law. Therefore, both regimes were pioneers in implementing competition legislation, but neither has established a trend when it comes to IP or the subject of whether trade boycotts constitute anticompetitive conduct. " Under a somewhat different set of circumstances, Article 21 of Brazil's Antitrust Law cites the "non- exploitation or the inadequate use of IPRs and technology of a company" as a significant indication of a violation of Brazil's free competition restrictions.

Acquiring, failing to utilize, or aggressively enforcing intellectual property rights (IPRs) over essential inputs in a particular market with the intent to eliminate competition in that market may lead to antitrust liability. Assuming no deceitful practices, one party may lawfully amass patents or acquire them via government grants. Therefore, a need to license the portfolio of rights or forced licensing may be necessary in response to the breach.⁷⁹ Businesses should have the freedom to pick their own distribution channels and business partners, as long as it doesn't severely impair competition in the market, says the Indian Competition Commission. There were allegations of refusal to deal with Prime Magazine Subscription Services Private Ltd and Wiley India Private Ltd. In this case, we see that the inter-brand rivalry in the STM market is unaffected by the previously indicated rejection or refusal to trade. It makes little difference since Opposition Parties are so insignificant in the market consumers generally. Additionally, the source of information may go on to other publications. Therefore, the reduction in competition in the STM journal distribution market is probably not going to be caused by the limitation that the Opposition Parties have imposed. Taking all of this into account, as we have already shown, such a refusal to trade has no discernible negative impact on market competitiveness. Consequently, the Commission has determined that Wiley Publisher has not violated

⁷⁹ Case No 07 of 2016

the requirements of Section 3(4)(d) of the Act.

Under Section 27 of the Competition Act, the CCI may sanction IPR owners who misuse their dominating position. Even if it violates section 3 of the same Act, the Commission may nonetheless sanction parties to anti-competitive agreements under section 4 of the aforementioned Act. Following the Colgate-Palmolive case law, the American legal system began to address refusal-to-deal difficulties. Section 1 allows one to refuse to conduct business with another individual, for instance, although there were loopholes elsewhere.

This theory, known as the anti-trust principle, was in use until the Colgate case was decided by the US Supreme Court. 'Colgate Doctrine' evolved as a doctrine after this case. This theory gave a non-monopolistic manufacturer the freedom to choose which partners he wanted to do business with. However, in instances of "resale price maintenance," or RPM, this philosophy was tested by a monopolist manufacturer, who eventually refused to do business with dealers who refused to adhere to the price maintenance. A result of this was the Supreme Court's decision in *Russell Stover Candies Incorporation* to reevaluate the premise described earlier. Some changes were brought about by this decision, such as the eventual eradication of the previously established "Colgate Doctrine" and the establishment of the "rule of reason" in defining the "resale maintenance policy." To ensure this, the subject is covered in the US legislation 35 U.S.C. § 271(d):

(d) The following cannot be used as grounds to decrease or invalidate a patent owner's capacity to seek remedies for patent infringement or contributory infringement:

- Made money by actions that, if carried out by another party without his consent, would amount to a contribution to the patent infringement.
- Granted someone permission to do something that, if done without his knowledge or consent, would be considered a kind of contributory infringement of the patent.
- In an attempt to safeguard his rights, he sought for possible instances of patent infringement or contributory infringement.
- Downplayed or denied any interest in the patent; or

- Unless the patent owner has significant market strength in the relevant market for the patented product or patent in issue, another patent or product acquisition may be necessary to conditionally license or sell the patented product or any rights to the patent.

But nevertheless, in *U. of Illinois Foundation v. Blonder Tongue Laboratories* ⁸⁰, Although the Supreme Court of the US recognized that a patentee had the right to refuse a license, it did not grant that right the authority to limit the use of the patent, thereby expanding its monopoly. In addition, the Kodak lawsuit,⁸¹ The seller might face legal ramifications if he takes use of his dominating position to launch a more sophisticated business, as the Supreme Court (SC) has ruled. This could be because of copyright rules or patents that give him special rights. A unilateral refusal to license does not always constitute anti-competitive behavior; but, if extreme exploitation does not occur, the desire to exclude others may be legitimately pursued as a business activity. If you choose to ignore competition authorities' inquiries regarding your denial, they may take action. As a result, the European Commission keeps a careful eye on refusals to deal, as specified in Article 102 of the TFEU. This situation is peculiar since, according to European law, refusing to trade is not criminal. In an effort to abuse its continuing growth and preserve its dominant position in the business, it has taken a controlled approach to dominating by refusing to trade. This market practice is creating an unfair advantage for competitors. One definition of market dominance is when a big corporation refuses to participate in customary commercial activities, such as allowing its competitors use its intellectual property or important infrastructure, or when it shuts off its suppliers altogether.

According to Article 102, it is explicitly forbidden for dominating firms to unjustly hurt other market trade partners by treating their transactions that are similarly situated differently. *United Brands v. Commission*, a decision of the European Court of Justice⁸² " A company with a good chance of making a sale cannot suddenly stop supplying a frequent client who is following all the rules of the road, particularly if their orders aren't very exceptional. "Refusing to sell would restrict markets to discriminatory practices and consumer prejudice, which could lead to the eventual

⁸⁰ 402 U.S. 313 (1971)

⁸¹ *Eastman Kodak Company v. Image Technical Services Incorporation* 504 U.S. 451 (1992).

⁸² C.22/7, E.C.R., 1978.

elimination of a trading party from the relevant market." Even if the ECJ acknowledged the need of "protecting company's business interest against strengthening the dominant position" when assessing reason, a refusal to deal cannot be justified if its true aim is to increase the dominating position. Twenty years ago, the European Court of Justice made a ruling in the case of "Oscar Bronner GmbH and company KG v Media print Zeitungsund Zeitschriftenverlag GmbH and company KG." A press undertaking that covers a significant portion of a Member State's daily newspaper market and runs the only nationwide newspaper home-delivery scheme in that state is not abusing its dominant position according to Article 86 of the Treaty if it refuses to pay the publisher of a rival newspaper that, because of its small circulation, cannot set up or run its own home-delivery scheme economically. Consequently, three criteria for identifying non-dealing behavior as a dominance abuse were established. All three of these considerations are detailed below.

- 1) The rejection is likely to lead to Oscar Bronner's complete dominance of the daily newspaper industry.
- 2) The daily newspaper market's reliance on home delivery services is crucial.
- 3) There is no objective rationale offered for such a rejection.

Thanks to the ECJ, the "indispensability test" is already a reality. The court found that the competitor's refusal to negotiate was fair since it demonstrated that economically viable alternatives could not be thought of in any other way.

4.2.8 LICENSE AGREEMENT: PRICE FIXING

If the owner of the patent has full authority over the manufacturing, distributing, and selling of their patented goods, then the licensor may decide on and alter the product's pricing at any time. At its core, this is a licensing agreement's price clause. The courts uphold the validity of a term where the selling conditions are designed to guarantee that the patentee is paid for their exclusive right to use the product. The capacity to profit from the product's selling price is a crucial aspect of a patentee's exclusive right. Finally, patentee's ability to sell is directly impacted by licensee's selling price of patented things. Because the patentee transfers their right to manufacture and sell patented things to the licensee, this is the rationale for it.

4.3 STANDARD ESSENTIAL PATENTS AND FRAND

Nowadays, patented technologies and items are essential to people's everyday lives. Typical audio devices include earbuds, radios, televisions, desktops, laptops, tablets, Wi-Fi and other wireless technologies, automobile ignition and transmission systems, and countless more. Interoperability describes the degree to which two technologies or products rely on one another; for example, in order to use Wi-Fi, we need a device that supports it, and in order for an earphone to play music, it must be linked to another device that can create the music.

Technological progress necessitates new inventions, which in turn highlights the importance of technical standards. Interoperability, which guarantees consistent product quality and affordability, can only be achieved when technology and products adhere to these standards. Now, in order for all these various devices to function in harmony with one another, there must be certain established standards in order to accomplish this interoperability. Therefore, technological standards, in the form of protocols that enable devices to interface with one another, are often required for the devices to function. These technical standards define a technical process or activity in a way that everyone in the industry can agree upon, which helps with system interoperability and convergence of practice. Technical interoperability standards are becoming more important for components manufactured by different businesses to enable them to "talk to" one other without issues.

4.3.1 WHAT ARE STANDARDS?

It is not a novel idea to have standards in our everyday lives. The value of standard measures was acknowledged by civilization long ago, perhaps 4,000 years ago. Without a uniform method, which is agreed upon by both individuals and organizations, it is impossible to measure weight or distance. The need for uniformity increases as technology develops. As time goes on and technology improves, the usage of standards likewise increases. The advancements in standardization are directly responsible for the lightning-fast development of ICT. When everything is defined and followed by the book, innovation and technological advancement are both accelerated.

Any product, service, system, or component, as well as any technique or process, may

have its specifications laid down in a document that is known as a standard. The most fundamental example would be an A4 sheet, which is used for printing all over the world. Any company that makes photocopiers or printers needs to have specifications for printing on A4 sheets. Another common example is a phone charger. Most mobile phone manufacturers use the standard USB-C port, but Apple used a different one for their iPhones. However, recently, European legislation mandated that all personal electronics manufacturers switch to the USB-C port, so Apple recently announced that they will be releasing an iPhone with a USB-C port shortly after the legislation took effect. Products and services that adhere to standards not only make life easier, but also guarantee their dependability, safety, and quality. In addition, standards are seen as a crucial tool for encouraging the broad acceptance of new technology in several sectors, including, but not limited to, ICT. One of the several advantages of standards is that they make it possible for all linked entities to function together. Standards have the potential to boost production volume, which in turn reduces production costs and encourages innovation. By making it easier for customers to switch brands, standards may boost competition. Additionally, standards have the potential to facilitate the establishment of the internal market that the TFEU seeks to create by uniting various national markets.

Standardization might include a wide range of topics. Engineering, transportation, distribution, building, agriculture, and food are all a part of it. So are health, safety, and environmental concerns. Products, services, and processes are all possible subjects for standards, which may provide a wealth of technical information in the form of physical and functional attributes, as well as procedures, protocols, and regulations. Management systems, including quality and environmental management systems, are addressed by certain standards.

A "standard" is defined as a "document approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory" in the context of the Agreement on Technical Barriers to Trade (TBT Agreement)." In this context, we may also address or manage needs related to product, process, or manufacturing method-specific symbols, packaging, marking, or labeling. As a result, the TBT Agreement views "standards" as voluntary, while "technical

regulations" relate to legally mandated documents. With the TBT Agreement, you're covered whether the document was made by consensus or not.

A kind of standard is known as the "de-facto standard." Due to their immense popularity and extensive usage, these standards have become the norm. For instance, while not having been formally approved by a standard-setting organization, a high-quality keypad or an A4 piece of paper may still become the industry standard. This is the result of a technology's widespread adoption and use. Some of these examples may stand on their own as standards, yet we use them all the time without recognizing it.

Formal, or de-jure, standards are those that are defined by a government regulation or a standard-setting organization. In order to ensure that all relevant parties are involved in the standard establishing process, SSOs must coordinate and assist it. International, regional, or national SSOs are all possible. Organizations like the (ISO) work to create global standards on behalf of member states' SSOs and governments. Some SSOs work on a regional level, creating or coordinating standards for a specific area. Some examples of such organizations are ETSI, ARSO, and the India Bureau of Standards. There are a lot of regional organizations that work together and provide a hand to national SSOs. This makes it easier for the region's standards and compliance evaluations to be standardized.

Each country has its own body responsible for establishing standards; these bodies can work independently to create national standards or they can choose to adopt standards from other countries; for example, India could follow a standard that was established by the US or the EU, or one that was reached through international consensus. There are two types of standards: required and optional. When it comes to matters of public health, safety, and environmental protection, mandatory standards are often considered. This is typically accomplished via a government-backed national standard-setting agency or by a legislative act. The standard-setting process in the automotive industry is open to a wide range of stakeholders, including manufacturers, consumers, trade groups, and professional organizations, in contrast to more mandatory processes in sectors like information and communication technology (ICT). In some nations, the national SSO is an official agency of the government (like China's Standardization Administration, or SAC), while in others, it is a separate but

closely affiliated group (like Japan's Industrial Standards Committee, or JISC). A national standardization system in the US is comprised of several SSOs, both public and private, with the non-profit (ANSI) accrediting the SSOs and approving the standards they develop as the ANSI American National Standards. Depending on each country's socioeconomic situation and government policy, the operating organization, funding method, governance, and legislation may vary.

4.3.2 HOW STANDARDS ARE SET

Data collected by the Worldwide IP Organization indicates that the majority of standards are "developed and revised collaboratively." Businesses involved in both the technology and the end product industries, as well as consumers, specialists, and interest groups, are all brought together by the SSO to choose which technologies will be part of the standard. Among the official SSOs overseeing "Highly developed sets of procedures for certifying new standards" on a global scale is the Global Telecommunications Institute. (W3C) is one example of are less formal, smaller, and concern themselves with more specific issues. As a whole, the ecosystem has gotten more complex, and companies' role in standard-setting has expanded.

Even while each SSO and SDO has its own unique set of policies, processes, laws, and norms pertaining to intellectual property, there are some shared features that all of them adhere to. When SSO/SDO decide to adopt a technology as standard, they usually follow these steps: is comprised of the "Inception phase," which is associated with the recognition that a new standard is necessary and, therefore, the commencement of the standardization process. You need to submit a proposal to the SDO in order to begin working on new standards. Depending on its kind and internal structure, each SDO has its own unique submission process for new standardization activities.

Suggestions for new standardized measures may only be sent to ITU-T by persons representing member states of the International Telecommunication Union (ITU) or connected organizations, such as enterprises and colleges. Administrative entities, Members of the ETSI may be either NSOs, businesses, research organizations, or universities, and any one of these groups can serve as the organization's head. The relevant Study Group (SG) (ITU-T, (c)) is the internal body responsible for technical

activities in the sector. Anyone in the group may reach out to them with any kind of request. Advice might come from a variety of places, including the EC, the EFTA, and the industry specification groups and special committees (ISG9) of the existing ETSI Technical Bodies.

Make sure your idea satisfies the criteria of an existing TB before you submit it. Whether it's a new TB recommendation or a request to amend the scope of TB, or if it involves ETSI Partnership Projects (EPP7), submit your idea to the ETSI Board. If your concept has a larger impact, submit it to the ETSI General Assembly. The International Electrotechnical Task Force (IETF) is another prominent example since it uses simple, non-bureaucratic internal procedures. There is no membership fee or application required to attend an IETF conference; all that is required is registration. Anyone may propose a new IETF definition by joining the relevant WG, sending an email to the WG mailing list, or showing up at the WG meetings. Contributing a "Internet Draft" to the "Internet Drafts Directory" on the IETF website is one option. The community may then review the paper informally and provide feedback (IETF, (c)). The Internet Engineering Task Force (IETF) suggests that members establish "groups of interested individuals hold informal get-togethers to discuss and develop their ideas" (IETF, 2012), have unofficial "side meetings" to gain preliminary agreement, and then produce more stable proposals.

- Following the conception step, the participating SDO must formally approve the proposed new standardization action. Afterwards, the SDO must devise a comprehensive strategy for the task at hand, outlining its execution within its own organization, the timeline, the desired goals, and the distribution of necessary resources.
- “The relevant standardization documents enter a "drafting" phase after the approval of the new standard proposal and the start of actual work. This phase is characterized by an abundance of technical and editorial work that is executed in compliance with the specific entity's internal workflow requirements. Once the documents are determined to be stable and mature, they go on to the "approval" process.

In order for SSOs and SDOs to reach a standard, the procedures mentioned above

must be followed to the letter. Nevertheless, settling on a single technology for universal usage is just the first step in the lengthy process of establishing a standard. The most important thing to include is how the establishment of a standard impacts the market structure for that technology, which includes issues like competition and FRAND concerns.

4.3.3 BENEFITS OF STANDARD SETTING

The advantages of standards might vary since they serve various goals and include a wide range of items. Many criteria were based on overarching social, safety, and environmental goals. Standardization primarily promotes economic efficiency, which in turn benefits consumers greatly. It has been said that the most notable benefit is interoperability, which is the primary objective of standards, particularly in the telecom industry. Because consumers give more weight to a product's usefulness when more people use it, interoperability increases the network effect.⁸³ Standardized goods and services gain consumer trust due to their reliability, efficiency, and uniformity. Based on the premise that "one standard is widely accepted in the market," all products and services adhere to the same set of standard essential principles (SEPs). Research and development becomes more efficient, economies of scale occur, and new product creation platforms become more unified as a consequence.

Consequently, prices are cut and expenses are lowered, especially for items and components that are standardized. In addition, rather than having many technology holders create it independently, SSOs will likely set a higher standard by selecting the finest from ex ante disposable technologies. The goal of this "choose-to-be-better" approach is to alleviate a lot of problems, hazards, and drawbacks that customers face. Without standardization, consumers would be left to their own devices in a world of competing technologies, with no guarantees that their preferred option will remain available as rivals eliminate or reject it, or that new, improved alternatives may emerge.

The encouragement of innovation is beneficial to standardization. For the simple reason that whenever a new standard is established, a new market is born, which in

⁸³ Philippe Chappatte, "FRAND Commitments—The Case for Antitrust Intervention" 5 *European Competition Journal* 319-346(2009).

turn gives birth to a plethora of new goods, services, and technology. The most glaring example in the telecom industry is the evolution of networks from 1G to 4G and soon 5G. Through the exchange of current information and technological know-how, new concepts emerge throughout the research and development process. One effective method of encouraging creativity is dynamic standardization. First, we'll go over some of the benefits:

Market creation

When many different products and companies work together to improve a product's technology, everyone wins. When the product is standardized, the different companies can all enjoy the benefits, and a new market is born.

Market Entry

New manufacturing and R&D firms will have an easier time competing with more established ones in the market thanks to standardization.

Interoperability

To paraphrase European Commissioner for Competition Mrs. Neelie Kroes, standards are the "foundation of interoperability." Customers in Europe (and a lot of other places) may now use the same phone from any manufacturer thanks to mobile phone standardization.

Network effects, which increase interoperability, are directly related to the product's perceived value in proportion to the number of users, according to consumers.

Lower Costs

Companies may be able to take advantage of economies of scale and reduce expenses and prices when all of their goods use the same basic technology. Additionally, new entrants may reduce their expenses with detailed criteria.

Improved Product Quality

When members of standards-setting organizations (SSOs) combine and choose the finest technology, they increase the likelihood that the resulting standard will be better

than what any one member could accomplish working alone.

Reduced Risk for Consumers

When there isn't any kind of standardization in place, competition across technologies usually leads to a small number of technologies controlling the market. If customers' preferred technology is pushed to the sidelines, the gear they buy might become outdated quickly.

Increased Downstream Competition

Consumers' switching costs are reduced by standardization, which enhances competitiveness in downstream markets. For example, if mobile phones could connect to the networks of other providers, it would be simpler for consumers to transfer phone companies, which might lead to cheaper phone bills. Similarly, if an open standard were to be established, it may increase competition among producers of handsets and other equipment.

Increased Incentives to Innovate

Due to the fact that technological standards are sometimes established via competition between different technologies, new product providers run the danger of losing money and having to leave the market before they've made back their initial investment, a phenomenon often referred to as "sunk costs." "Sunk costs" Standardized technology has grown in popularity due to the reduced risks and higher incentives to invest in it. Numerous people put in a lot of time and effort to back standardization initiatives both before a standard is issued to the public and during its lifetime, which may see numerous revisions. Increased revenue is possible sooner with standardization than without it because new technology and equipment are adopted more quickly and because the client base for goods that adhere to the standard grows. This puts companies in a far stronger financial position to spend on R&D, which they may use to enhance current offerings or come up with whole new ones.

4.3.4 RISK OF STANDARD SETTING

The goal of SSOs and SDOs is to establish standards for the greater good, but once those standards are in place and the industry starts using them, there's no turning back;

products must be standard compliant. There may be problems with intellectual property and competition if the market becomes trapped. Because they are incompatible with existing popular services and goods, firms and consumers will have a very hard time switching to alternative technologies once the standards that have been put in place become considerable. Consequently, non-essential technical formats and technologies that can be replaced or are functionally similar are not considered. There can be no technological advancement or innovation since the whole industry is bound to that one standard. As an example, the telecommunications sector and mobile services have been plagued by the lock-in effect since the early 1990s, when the GSM standard was first introduced. It all started with the GSM standard, then moved on to 2.5G for better digital technologies, 3G for UMTS networks, 4G for HSPA and HSPA+, and finally 5G for the future.

In addition, "it is not possible to manufacture standard compliant products without infringing the IPR covering that technology once a patented technology is incorporated as an essential part of a standard." Perhaps other criteria were taken into account than the patentee's standards, as the market becomes more influential when more standards are acknowledged and utilized. In just one mobile device, you may discover hundreds of SEPs that make it compatible with other platforms. One unlicensed mobile phone might so infringe upon hundreds of patents. All it takes is one SEP to create a monopoly in one industry. Antitrust concerns arise as a result of the possibility of increased market dominance. However, issues arise when the standard is both excellent and widely utilized, leading to widespread adoption, investment in items by enterprises, chip production by manufacturers, etc. In addition, "the SEPs holders are able to manufacture and produce products and services compliant with the standard exclusively and are able to charge significantly excessive royalties they could not have without being included in the standard." The term used to describe this event is "patent hold- up." The total cost might be higher than if just one person owned all the SEPs if other people with complimentary SEPs set up their own SEPs. This happens when there are more persons with complimentary SEPs. Having said that, sectors in which:

"Several SEPs are held by different companies;

When used together, SEPs are ideal: A single patent license is worthless without the

simultaneous licensing of all other crucial patents;

A royalty rate is seen as minimal since there is no marginal cost of licensing for each unit created.

These patents are now known as Standard Essential Patents (SEPs) since they often cover technology that an SSO has deemed essential for a standard's implementation. This study will focus on SEPs, which cover technologies that an SSO has determined are crucial to a standard's implementation, and how they differ from patents that aren't fundamental to a standard in terms of licensing and enforcement. In turn, these standards could include a large number of patents that cover various aspects of the technology that are necessary for the devices to function.

Even if none of the aforementioned risks are always present, they become much more so when a technology that has been recognized as a standard is patented or is soon to be. In this case, any implementer who wishes to adhere to the standard will need a license from the patent owner.

In this technological domain, one kind of patent is known as a "Standard Essential Patent" (SEP). These standards provide substantial obstacles to patent licensing, despite their critical importance in today's technology-driven society. The market is compelled to embrace a technology once it is designated as the standard. So, the SEP owner has more leverage in negotiations and may use this to their advantage by cashing in on the standard's worth rather than the underlying SEP's.

The most common ways in which patent holders abuse their power in the market include: refusing to license, charging exorbitant prices, engaging in unfair or discriminatory licensing practices, using SEPs in an anticompetitive way, abusing their dominance, and preventing competitors from entering the market through the misuse of patent and regulatory processes, such as SPCs, excessive pricing, and (PSAs).

This problem has prompted SSOs and SDOs to institute IP regulations. The patent holder must reveal the patented technology and consent to license it in accordance with the (FRAND/ RAND235) standards if the invention is selected as a standard and subsequently patented.

4.4 FRAND

Members of SSOs often agree to disclose their patents or patent applications pertaining to technology promptly. Plus, if they think their patents would be essential to the standard, they will license them on FRAND terms. According to the Patent Act, this is not required explicitly. This means that patentees who aren't associated with SSOs aren't bound to do anything with their innovations beyond meet market demand or engage in FRAND licensing.

"When patented technology is fundamental to a standard, manufacturing goods that meet the standard's requirements will violate the rights to that technology's intellectual property. The leading patent holders have a stronger market position as a result of standardization. If, for instance, many competing technologies were to vie for market share before a standard was established, In such a market, no one could possibly charge more than the going rate. However, once the standard is chosen, the industry will start making and developing items that match it. Large and standard-specific investments are required in the mobile telecommunications industry for product design, manufacturing facility setup, network equipment and handset acquisitions, network deployment, etc. Manufacturers and operators of networks are essentially bound to a certain quality after they've invested heavily in it; otherwise, they risk losing all of their hard-earned money. Patent hold-up is the name given to this scenario, which has direct implications for the competitive landscape.

By its stated rules, SDOs impose the following duties on participants: (1) to make public any patents needed to implement a standard, and/or (2) to license these patents on FRAND terms. The patent holder must comply with the FRAND responsibility by providing a free license to all qualified participants, including the patent holder's adversaries. According to the Telecommunications Industry Association's policy on intellectual property, all applicants should be allowed to receive a license under any Essential Patent on fair and non-discriminatory terms and circumstances. The licensing rights are held by the signatory patent holder. In the event that a dispute over royalties emerges, they must act properly to settle it, which may include using a neutral third party such as a court or arbitrator.⁸⁴ Additionally, the Federal Arbitration

⁸⁴ Mark A. Lemley and Carl Shapiro, "A Simple Approach to Setting Reasonable Royalties for StandardEssential Patents" 28 Berkeley Tech. L.J. 1135 (2013)

Act may compel arbitration of such an agreement.⁸⁵

Downstream players may rest easy knowing that SEP owners "accept that their technology must be available to third parties on FRAND terms," thanks to the FRAND commitments that have arisen as a realistic industry solution to these issues. A fair, reasonable, and nondiscriminatory licensing of patents included in technical standards is an obligation of all SEP holders. Thus, "FRAND commitments give firms the guarantee that they can access standards and make products based on standards, provided they're ready to pay reasonable royalties to SEP holders." With regard to antitrust issues, the Commission's Horizontal Guidelines affirm unequivocally that the FRAND pledge is to "prevent IPR holders from making the implementation of a standard difficult by refusing to license or by requesting unfair or unreasonable fees (in other words excessive fees) after the industry has been locked-in to the standard or by charging discriminatory royalty fees." This means that the applicable patents should be made available to any potential implementer. Refusing to provide, discriminatory royalties practices, and patent hold-up are the three primary goals of FRAND. Inside three months of becoming aware of a critical intellectual property right (IPR) associated with a specific "Standard or Technical Specification," the Director-General (DG) of ETSI will request written confirmation from the owner that they are prepared to grant permanent licenses under the IPR to the following extent:

"Production, including the authority to create or procure components and subsystems tailored to the licensee's unique design for incorporation into the Production process;"

- sell, lease, or otherwise dispose of equipment so manufacture;
- repair, use, or operate equipment; and
- Use methods".

The fundamental FRAND promise is that SEP holders must voluntarily consent to having their technology included into standards. Remember that once your tech is in the standard, you have to license it out on FRAND terms to everyone who wants it,

⁸⁵ Jorge L. Contreras and David L. Newman, "Developing A Framework for Arbitrating Standards Essential Patent Disputes" J. Disp. Resol. 23 (2014)

including downstream competitors, other standard participants, and participating SSOs. Just so you know, "the FRAND obligation normally extends to the return commitment of the SSO/licensor to license back to individual patent holders" and includes a reciprocal license for future developments. Both the SEP holder and the prospective licensee stand to gain from a fair and reasonable licensing contract that considers the economic worth of the SEP. This is achieved via the FRAND obligations, which maintain neutrality. Therefore, making SEPs available is the major objective of the FRAND requirements, with financial compensation for SEP owners serving as a secondary objective. Thus, the value of FRAND agreements in promoting uniformity is readily apparent. The promise ensures that SEPs will have access, first and foremost. Until this promise is made, the policy does not restrict SEP holders' capacity to license their SEPs.

The license rights of SEP holders may seem to be being restricted, but in reality, the standard is being promoted, which draws in more manufacturers and consumers as a result of the acceptable compromise on one side. Secondly, when SEP holders are compelled to license their patents on non-discriminatory terms, it disproportionately affects industries in developing countries like India. Therefore, licensees of all sizes should not be given preferential treatment.

The FRAND obligations as an antitrust remedy are just the beginning; we are still adjusting to the standard, technology is evolving, standards are components of bigger sectors, and an increasing number of fields are moving toward standardization.

Given the contractual nature of the responsibilities, it is unclear how the interpretation is broadened to include additional sectors; moreover, as more areas fall within FRAND's purview, the complexity of the issues surrounding its interpretation will only grow.

It is yet unclear if FRAND commitments effectively resolve patent hold-up, royalty stacking, and similar issues.

4.4.1 DEFINING FRAND

Despite the lack of a formal legislative process, the author will endeavor to analyze the many interpretations presented by specialists in an effort to define the FRAND

term in his book.

Issues raised by FRAND interpretation include competition laws, the ability to decline service, and the process for setting standards. Nonetheless, the meat of the issue is plain to see: Are the FRAND expressions familiar to you?

How much may companies charge for their technology in accordance with their regulations? What steps may be taken to adapt to the given circumstances? Despite the lawsuit and its certain continuance, there is currently no globally accepted definition of FRAND words. Definitions of FRAND terms should be based on the American Georgia-Pacific case wherever feasible.⁸⁶ for whom the standards for royalty damages in the US are already well-established.

They were used in the context of standard setting by a judge in the Western District of Washington in April 2013.⁸⁷ The outcome of future debates on FRAND terms may be impacted by this ruling, should it be sustained. Although the components seem pertinent, they fail to "provide much more meaning than already exists in the ambiguous language of most [...Standard Setting Organizations' (SSO)] IPR policy statements".

FRAND terms

The calculation of royalties for the SEP depends on the interpretation of the phrase FRAND, although the concept is vague and has not been defined by legislation. Since the owner of the SEP has committed to provide the license on FRAND terms,.

Here, FRAND terms are only a mechanism for calculating royalties, with the goals of avoiding discrimination against anybody who is interested in obtaining a license and keeping everything open and honest.

To address the issue of patent owners having too much leverage after their patents are classified as SEP, SSO requires them to provide licenses on FRAND conditions.

Fair and Reasonable

Due of their association with the royalties required by the SEP owner, the terms

⁸⁶ Georgia Pacific Corp v US Plywood Corp, 318 F Supp 1116 (SDNY 1970)

⁸⁷ Mac Conforti 'U.S. Court Determines RAND Royalty Rate and Range for Motorola's SEPs' (2013)

"Fair" and "Reasonable" in FRAND must be seen through this lens. However, it is necessary to comprehend how the parties arrive at the FRAND accord before delving into the meaning of the phrase Fair and Reasonable. When an industry standard is patented, it becomes known as a Standard Essential Patent. It is now quite obvious from this categorization that the SEP license is totally contractual, with the parties concerned free to negotiate the conditions in accordance with their own agreements. Since SSOs were not actively engaged in drafting the FRAND provisions, there is a lack of clarity in the terms. Alternatively, as stated in ETSI's IP policy, "IPR holders, whether members of ETSI and their affiliates or third parties, should be adequately and fairly rewarded for the use of their IPRs in the implementation of standards and technical specifications. "ETSI shall take reasonable measures to ensure, to the extent possible, that standards and technical specifications are available to potential users in accordance with the general principles of standardization.."88 Looking at ETSI's IP Policy, one can see that it only lays out the rules for how the parties should negotiate; it doesn't go into detail about how the SEP owner would be fairly paid. "Fair" and "Reasonable" are defined in the policy as referring to the innovation and the pay that goes along with it. For this reason, understanding the definition of "Fair" and "Reasonable" requires knowledge of the "Fair" and "Reasonable" royalty. It is vital to evaluate the innovator's R&D expenses and investment when determining reasonable royalties, but when addressing standard patents, one must think about the value that the standard patent brings to the final product. Since the market strives to get the full advantages of a standard-setting technology and the firm that employs it is likely to invest substantially in its production, the patent holder of that technology has more bargaining power.

In order to prevent the perception of bias towards either the patent owner (EMVR) or the licensee (SSPPU, Georgia-Pacific factors), the "fairness" component of FRAND establishes a general principle to regulate the impact of different approaches or instruments used to determine reasonable royalty rates. A royalty rate's "reasonableness" is evaluated under the guise of "fairness," to rephrase. Keeping the overall market dynamics in mind when defining fairness as the balance of interests among the stakeholders is crucial when considering standardization-specific dynamics like the de facto monopoly of strong portfolio owners, downstream channels, patent

⁸⁸ IPR Policy, European Technical Standardization Institution.

fragmentation, and vertical integration of SEP holders (who can be inventors and implementers).

It is necessary to consult the EU standards in order to ascertain if the royalty is reasonable and fair. According to these rules, "whether fees imposed for patents in the standard-setting context are unfair or unreasonable will be based on whether the fees bear a reasonable relationship to the economic value of the patents." Accordingly, "Fair" and "Reasonable" ought to represent the proportionate improvement over the next best alternative, as determined by comparing the standard patent to the best accessible choice during standardization. The parties alone have the power to decide what is a reasonable and fair royalty rate, even if the FTC, the EU, and the courts have often attempted to lay the framework for such a rate via their laws and decisions.

The precedent set by the commission and the courts does not provide a conclusive response, similar to the case of *United Brands*.⁸⁹ Case the court uses the cost-based approach, which means it looks at the costs and royalties, and if the royalties are high, it compares them to competing products. This could work, but the approach isn't very clear, and in a technology industry like this, comparing prices might not give you the right answer.

A second strategy that is comparable to the EU's is focused on comparing the economic value of the technology. Again, this method isn't all-encompassing; it only compares the patent's worth before and after licensing, without considering whether or not it would be the same in another context.

A different strategy put forward by the Commission, known as "top down analysis," proposes that royalties should be proportional to the value that the patented technology contributes to the end product rather than just the technology itself. Despite the method's logic, no exact formula is provided.

The present techniques are unable to account for the fact that the precise definition of "Fair" and "Reasonable" will differ from case to case due to the fact that these approaches rely on individual facts, assessments, and other types of supporting data.

⁸⁹ Case 27/76 *United Brands v Commission* [1978] ECR 207

Non-discriminatory

Following that, FRAND terms include a "non-discriminatory" provision. Under the non-discriminatory approach, the idea of "license for all" is fundamental, which implies that the owner of the SEP cannot show favoritism towards any particular license. The term "non-discriminatory" is undefined and its meaning remains unclear, despite the fact that this is not a contentious issue compared to fairness and rationality. The term "non-discriminatory" has three parts in the FRAND framework: the first part addresses royalties, the second part addresses license restrictions, and the third part addresses refusal to deal, which might intersect with competition laws.

Price discrimination can be prevented by not treating royalty differently. Since this is a contractual matter, the result will depend on how well the parties negotiate. Neither the law nor the SSOs deal with this issue, so there are no regulations to follow. To unfairly disadvantage other trade partners in competitive circumstances by "applying dissimilar conditions to equivalent transactions with them," as stated in Article 102(c) of the TFEU. It is quite evident from this clause that a SEP owner is engaging in discrimination if they use various royalties arrangements for different parties. The issue arises when the parties to such transactions often demand non-disclosure agreements from one other, leaving the parties unaware of any potential discrimination. How beneficial a unified pricing structure would be to company operations is another important factor to think about. This is certainly not the case in nations like India, where local producers confront intense rivalry from global powerhouses such as Samsung and Apple.

Discrimination is another problem with the licensing conditions. Every party must be given an equal opportunity to obtain licenses by the SEP owner in accordance with FRAND. Having said that, the issue of who will decide if the conditions are non-discriminatory still remains. Since FRAND is just a contractual requirement, the essential issue is whether it can compel the parties to follow uniform terms and conditions. To make matters worse, larger manufacturers may be able to negotiate better terms than their smaller counterparts, which might result in terms that differ.

Also, SEP owners who have to pay FRAND royalties have to negotiate an agreement with whomever is ready to pay FRAND royalties, rather than having the exclusive

right to "license to all." The non-discriminatory obligation becomes prominent and serious when a SEP holder basically agrees to license a patent to everyone. No matter the size, readiness to make changes, or intention to compete with the SEP holder in the same market, all licensees will be granted the same terms.

Despite the growing importance of the non-discriminatory word, it does not mean that licensing terms and conditions will be the same regardless of different contracts. Depending on the circumstances, the licencing agreements might potentially differ. Consider the possibility that SEP holders' own interests are diametrically opposed. Maximizing revenues and benefits is likely to be the aim of a technology market-focused SEP holder, whose pay is mostly or entirely derived from licensing fees. However, in a vertically integrated SEP, the holder is interested in both product and technology development and wants to make sure their technologies are up to code. They might try to keep competitors out of their downstream market and not let other manufacturers license their innovations. In these deals, each partner negotiates FRAND terms according to their market and expertise, but nobody sees what they're agreeing to. This makes figuring out whether the SEP owner was discriminating very difficult. Prior to standard-setting, SSOs should specify these terms and conditions so that patent owners may decide whether they want to be involved.

The exact meaning of FRAND will differ from case to case because to its contractual nature. No one authority, such as the court, SSOs, or commission, has been able to establish guidelines for its interpretation.

Refusal to license

In the event that the owner of the SEP declines to license the patent to a specific business, it is assumed that we would offer licenses to anybody willing to pay for them provided the patent owner agrees to the FRAND conditions. Since the IP owner is free to pick his trade partners and is not required to do business with everyone, a refusal to license does not constitute a competition issue in and of itself, according to the rules of the IP Policies and the Competition Policies.

Although it is the most contentious point in the IP Policy and Competition interface, the right to exclude others from using patented technology is an inherent part of intellectual property (IP), which gives its owner monopoly rights. If an IP owner

refuses to share their technology, it could be seen as a violation of competition laws. However, in the European Union and the United States, for example, a simple refusal to license is not considered anti-competitive as it does not constitute an abuse of a dominant position. In EU the refusal to license raises the competition issue if it fits four requirements i.e.⁹⁰

- 1) the access to the input protected by the IPR is indispensable to compete in the market,
- 2) the refusal to license excludes effective competition in the market,
- 3) it prevents the emergence of new products,
- 4) and the refusal is not objectively justified

In SEP encumbered litigation, the situation is quite different. When a patent is deemed standard, it becomes the norm. Any company that wants to stay in the market needs to obey the patent. If the implementer can't get a license, he's out of the competition. Additionally, the SEP owner may also be the manufacturer; in this case, he may choose not to provide licenses to other implementers in order to maintain his position as a market leader.

After agreeing to FRAND conditions, SEP owners are required by the EU to offer licenses to anybody who is ready, willing, and able to do so. "grant a license to an unrestricted number of applicants." This is what SSOs like the International Telecommunications Union ("ITU"), the Electrical and Electronics Engineers ("IEEE"), and the European Telecommunications Standards Institute ("ETSI") demand from SEP owners. As stated in the case of *Microsoft v. Motorola*⁹¹ According to the US court of appeal, the wording does not specify any restrictions on the number of licensing applicants or the kind of licenses that might be granted.

When SEP owners refuse to license firms who make components that follow the standard, they are breaching their FRAND promises. The goal of SEP holders who selectively refuse licenses is to increase the royalty rate.

⁹⁰ T 201/04 *Microsoft v. Commission*, ECR II-4463, 647 (2004)

⁹¹ *Microsoft Corp. v. Motorola, Inc.*, 696 F.3d 872, 874 (9th Cir. 2012)

So, SSOs should tighten licensing requirements so that SEP owners cannot refuse to license under any circumstances; exceptions can be made if SEP owners can prove beyond a reasonable doubt that the implementer is simply trying to avoid contracting.

4.5 SSO's IN INDIA, US, EU AND CHINA

4.5.1 INDIA

The sheer size of the Indian population makes the country an attractive buyer of all things technological. Thanks to the government's "Make in India" program, the country is rapidly expanding its role as both a consumer market and a manufacturing powerhouse. Additionally, it was among the first countries to implement 5G mobile technology. Given these circumstances, it's safe to say that conflicts between intellectual property rights and competition laws will be commonplace in India's market. In light of this, the Competition Commission of India ('CCI') has launched multiple investigations into the licensing practices of different SEP holders; Ericson is the common complainant in a number of cases involving SEPs that are presently pending in the Delhi High Court against Indian and Chinese mobile manufacturing companies (e.g., XAOMI, Gionee, Lava, Micromax, and many more).

However, the norms of law that govern SEP and FRAND matters are still undefined, and Indian competition law is in its infancy. In one case, the Delhi High Court ruled that a SEP owner's commitment to a FRAND license does not absolve him of the right to seek an injunction, but in another, the CCI found that the SEP owner is a dominant player and that seeking an injunction constitutes an abuse of dominance.

In India, SSOs might have a private, quasi-public, or public character. The SEP holder gains a lot of authority under the SSO-SEP system. The first step is to request the SEP holder's consent to use the standard; this consent is discretionary and may or may not be given.

This is a serious problem since the goal of the FRAND declaration is to make standardized technology available. Truthfully, figuring out the FRAND license conditions is a pain using the SSO system. These are the key points about SEP licensing:

(1) Members are obligated to provide any information that might be relevant to the

application of a proposed standard.

- (2) On FRAND conditions, the members must agree to license the standard.

One of the goals of establishing SSOs was to have these rules in place to guarantee widespread acceptance of the standard, but in practice, they have not been successful in doing so. Voluntary agreements between SSOs and SEP holders are all that exist in India regarding SEP licensing on FRAND conditions. No one has yet defined FRAND or outlined a process for putting it into practice. In India, the BIS serves as the national SSO.

The Telecom Engineering Centre is unique among India's telecom standards certification bodies in that it is acknowledged by the government. Within India's information and communication technology (ICT) industry, private SSOs include the Global Information and Communication Technologies (ICT) Standardization Forum for India, the Telecommunications Standards Development Society of India, and the Development Organization of Standards for Telecommunications in India. Other well-known SSOs in the cellular and Wi-Fi industries are the International Telecommunication Union and the Institute of Electrical and Electronic Engineers. Here are the specifics of the Indian SSOs:

- 1) In India, the telecom standards development organization is the industry-led not-for-profit Telecommunications Standards Development Society of India (TSDSI), which has official recognition from the Ministry of Telecommunication (DoT). Its official birthdate is January 7, 2014. Contributing to the next generation of telecom standards and driving the ecosystem of intellectual property rights development are its principal objectives. In order to assist developing nations in South Asia, South East Asia, Africa, the Middle East, etc., with their telecommunications standardization needs, TSDSI supports technical standards, protects intellectual property rights, assists in the creation of manufacturing expertise within the country, and provides management in this area. Protecting TSDSI, its members, and everyone else who uses TSDSI technical specifications and standards is the primary goal of the TSDSI intellectual property policy.
- 2) A key player in the development of telecom equipment, service, and interoperability standards is the Telecommunication Engineering Centre, which is

part of the Department of Telecommunications and the Ministry of Communications and Information Technology. When developing new standards, TEC works in tandem with well-respected international organizations. TEC provides guidelines for the usage of equipment in Indian conditions and has an intellectual property policy. TEC has established the Asia Telecom Standards Institute in New Delhi and provides telecom consulting services to nations in Southeast Asia and SAARC. "Standard for IPV6 Conformance and Interoperability" (SD/IPV6-001/01 MARCH.2011), "National Standards for H.248" (SD/GCP-01/02 AUG.2008), "National Standards for SIP" (SD/SIP-01/01 SEP.2008), and "National Standard for V5.2 Interface" (TEC/SD/SW/VAN-SIG/03/ MAR.2010) are just a few of the technical standards that TEC has developed for India.

- 3) The Government of India's Ministry of Consumer Affairs, Food & Public Distribution, and the Bureau of Indian Standards (BIS) are the guiding forces behind this governmental SSO. In 1947, it was constructed. So date, more than 19,000 Indian Standards have been created by more than 650 Technical Committees and 14 Division Councils. Every year, BIS formulates more than 350 new and updated standards. BIS lacks an intellectual property policy.
- 4) An SSO that was established via a public-private cooperation is the Global Information and Communication Technology Standardization Forum for India (GISFI). It is involved in information and communication technology as well as related fields including biotechnology, energy, and wireless robots. Similar to ETSI's IPR policies, GISFI's IPR policy.
- 5) A private SSO, the Development Organization of Standards for Telecommunications in India (DOTI) works to create telecom standards that are suitable for the Indian context. It is based on the paradigm of public-private partnerships. The goal is to create transparent standards that are based on agreement and are created via proper procedures. Incorporating Indian standards into global standards and promoting standards indigenous to India are its key objectives. In contrast to GISFI, it recognizes three distinct membership

categories: main, associate, guest, and observer.⁹² Similar to GIFSI, DOSTI's position on intellectual property rights is:

We cannot adopt a one-size-fits-all approach because, as we've seen, Indian FRAND regulations are still evolving in the courts and the commission must exercise extreme caution when determining cases. The attitude of the court in dealing SEP burdened lawsuit is explained later in the text via extensive discussion of the instances.

4.5.2 UNITED STATES

U.S. policy does not adhere to the idea of uniformity. The establishment of the American Engineering Standards Committee (AESC) in 1916 is often seen as the genesis of organized industrial standardization in the US. Participating in this powerful group were officials from the Bureau of Standards, the Department of War and Navy, and the five preeminent engineering organizations of the time: electrical (AIEE), mechanical (ASME), civil (ASCE), materials (ASTM), and mining (AIME). In the twentieth century, the American Standards Association (ASA) and its predecessor, the American Engineering and Science Council (AESC), worked together to coordinate standardization efforts across many different sectors and to influence U.S. policy on standardization.

Instead of officially recognized semi-state bodies as in the EU, the majority of SSOs in the US are private organizations. Perhaps this explains why antitrust regulators in the United States are less stringent when it comes to standardization processes. The US authorities have not released standards-specific criteria, although they do apply the principles for competitor cooperation as well as licensing rights to intellectual property, with the addition of a report that addresses the specific ways in which IP-related endeavors could benefit from the concepts outlined in the 1995 Guidelines along with its part on agreements for standardization. Letters from business reviewers have been included to complement these on some matters.

The Antitrust Guidelines for the Licensing of Intellectual Property must be followed by any IP licensing policy plan in the United States. If individuals involved in the standard-setting process are able to access patent pools, it will be because of these

⁹² RavikantBhardwaj, "Standard Setting in India: Competition Law and IP" 5 Indore Management Journal(2013).

Guidelines. The IP Guidelines state that it is anti-competitive to exclude parties without market strength from patent pool arrangements. The case of *Northwest Wholesale Stationers v. Pacific Stationery & Printing* was⁹³, the judge ruled that:

It was not to be considered illegal to exclude a rival from a buying cooperative unless there was evidence of market dominance.⁹⁴

A "umbrella" non-profit, the American National Standard Institute (ANSI) is responsible for setting US standards. In order to establish a national agreement about standards, it verifies the IP policies of SSOs. Accreditation is contingent upon SSOs meeting the ANSI Essential Requirements. The same document provides the IP policy of ANSI in Section 3.1. An important patent may be used in SSO policies, according to ANSI policy. An ANSI-Accredited SSO will request the following actions from the patent owners if they learn that a technical standard is patented:

- (1) Make sure it doesn't impede vital patents, and
- (2) Make sure everyone in the business may license the patent on FRAND terms.

Additionally, according to ANSI policy, neither ANSI nor any SSO is obligated to determine whether patents are important. Power, energy, transportation, biomedical, nanotechnology, and other industries rely on the standards developed by the Institute of Electrical and Electronics Engineers Standards Association (IEEE-SA). IEEE-SA is an SSO that has official government authorization. The IEEE-SA Standards Board Bylaws, Section 6, outline its patent policy. The Operational Manual of the IEEE-SA Standards Board is an annex to the Bylaws.

Important patent claims are outlined in the patent policy's standards. If a patent covers a proposed standard, IEEE requests that the patent holder provide FRAND licensing conditions. As part of the standard-setting process, IEEE requests a Letter of Assurance. While it is not required of the member submitting the letter to do a patent search, they should make a reasonable and good faith inquiry as to whether it is patented. Members who are involved in the standard-setting process must inform IEEE of any patent claims that they are aware of in order for the patent policy to be

⁹³ 472 U.S. 284 (1985).

⁹⁴ Cf. *Northwest Wholesale Stationers, Inc. v. Pacific Stationery & Printing Co.*, 472 U.S. 284 (1985).

properly implemented. When a participant's essential patent, licensed on RAND conditions, is subsequently transferred to another party, the IEEE-SA patent policy takes this into account.

Standards for the World Wide Web are addressed in the W3C Patent Policy. Owners of patents that are vital to a standard are required to provide a royalty-free license. As long as they agree to the terms of the W3C Royalty-Free Licensing, participants are under no need to disclose their patents. Anyone, including non-W3C members, may create, use, sell, import, share, and distribute the technology under this non-assignable, non-sub-licensable license without having to pay royalties. The licensor's SEPs are a part of it. If there is a disagreement with the W3C Patent Policy, the disclosure requirements for patents may be used to settle it. In the event that a crucial patent becomes public knowledge but is not covered by the W3C RF License, an Advisory Group is formed to provide a remedy, which can include looking at other standards. The Web Consortium makes public online lists of patents that were either disclosed or not over the course of the W3C process.

4.5.3 EUROPEAN UNION

European standards are preferred over their national or international counterparts in public procurement processes, and they are required for the mutual recognition and type approval of terminal equipment in the telecommunications industry.⁹⁵ In the past, EU legislations laid out all the specifics of the standard, which was used to create European Standards. The European Telecommunications Standards Institute is one of several European Standards Organizations that have been tasked with developing functional or design specifications to meet the essential requirements laid out by harmonization directives under the 'New Approach to technical harmonization and standards' since the mid-1980s. The EU Technology Transfer Guidelines include a block exemption mechanism that exempts certain parties from the requirements of Article 101(1) of the Treaty on the Functioning of the European Union, provided that other conditions are met and the parties' market share does not surpass 20%.

Heading 101 (formerly Article 81 TEC)⁹⁶ "Any cooperation between businesses,

⁹⁵ Commission's Annual Report on Competition Policy, 1995) available at:<http://ec.europa.eu/competition/publications/index.htm>

⁹⁶ EU, art.10.

decisions made by groups of businesses, or coordinated actions that could impact trade between Member States and aim to limit or distort competition within the internal market are all considered incompatible with the internal market and are thus prohibited." This includes:

- a) determine the terms of trade, including but not limited to, the pricing of goods and services;
- b) impose constraints on or exert control over investment, technological progress, markets, or output;
- c) marketplaces for stocks or suppliers;
- d) treat other trade parties differently while engaging in comparable transactions, giving them an unfair advantage;
- e) force the other party to agree to additional responsibilities that are unrelated to the content of the contract or that are considered standard practice in the business world in order for contracts to be finalized.

The Technology Transfer Guidelines differentiate between supplementary sources in line with current worldwide practice as well as alternative technology, similarly, there is a distinction between crucial and non-critical technologies, with vital technologies inherently complementing one another.

Determining whether a technology is necessary or not is an ongoing process. A critical technology may become obsolete due to the rapid development of new technologies. In order for technology to be considered important, the Guidelines state that it must be inseparable from the other technologies used to make the product or complete the process to which the pool is related, and that no other technologies, either inside or outside the pool, may replace it. So long as there is a legal intellectual property right protecting the technology, it will stay vital since there are no alternatives. Essential technologies must also be complementary.

Since many technologies have dual purposes, it might be difficult to tell which ones are complimentary and which ones are substitutes, according to the Technology Transfer Guidelines. When both technologies are in high demand due to increased

productivity, they are seen as complimentary even if they are really substitutes. When it comes to patent pools that include alternative technologies, the Technology Transfer Guidelines are quite specific.

When it comes to European telecommunications standards, the ETSI is the go-to authority. In addition, it is a frontrunner when it comes to creating global standards. The 654 members of ETSI hail from 59 different nations, including several outside of Europe. A wide range of telecommunications industry players, including manufacturers, network operators, and service providers, have their interests represented.

Eventually, after years of back-and-forth, the ETSI's patent policy was approved in November 1994 and its members ratified it in November 1997. Its policies have been green lit by antitrust agencies in the United States, Japan, and the European Union. Two principles form the basis of ETSI Policy:

- 1) Members must promptly notify ETSI of any patents that are considered important; and
- 2) Each member will be required to license their patents under FRAND terms. The ETSI may look into different technologies for the standard if the members don't follow the FRAND criteria.

4.5.4 CHINA

While China is currently second only to the United States in patent applications, the country has come under fire for allegedly showing little respect for the intellectual property of other nations. This comes at a time when China is dominating the global market for technology-related items and patents. China has been involved in standardization for some time, but only in the last several years has the country begun to make headlines. National standardization in China is overseen by the Standard Administration of China, and the country has pledged to bring its standards into line with international norms. By establishing standards, the Chinese government plans to become a major player in the information and communication technology sector. New advice on conflicts involving SEPs revealed in suggested national, industry, or local norms has also been issued by Chinese courts. As of April 1, 2016, the Supreme

People's Court of the People's Republic of China stated in its Interpretations (II) on Several Issues concerning the Application of Law in the "Trial of Patent Infringement Dispute Cases art. 24" that courts should not grant injunctive relief when a SEP owner willfully does not fulfill its obligation to grant a FRAND license to a manufacturer, even though the manufacturer is not obviously at fault. The question of whether injunctive action is available in FRAND instances depends on whether the patentee or the prospective licensee is at fault has just lately been addressed by Chinese courts.

Not just in the computer industry, but also in health, the environment, and other vital domains that impact human existence, SEP and FRAND have integrated into our everyday lives. Though there are many positive aspects to standardization, it has also broken the delicate equilibrium between intellectual property (IP) and competition rules, which has become the norm in modern society. Interactions and conflicts between intellectual property rights and competition laws are extensively covered in this chapter. Since both rights are at their most extreme—the patent owner having total monopoly and the possibility of abusing that monopoly—the tension between SEP and FRAND becomes more apparent. As a counterpoint, SSOs play a vital role in balancing the scales by harmonizing the laws via their policies. Many ambiguities remain for potential disputes, even if SSOs have implemented the necessary IP rules and imposed the requirement on the SEP owner for FRAND commitment.

CHAPTER 5

CHALLENGES, DISPUTES AND REMEDIES IN FRAND AND SEP

5.1 INTERVENTION AND DOMINANCE POSITION

The standardization process inherently entails rivals getting together to deliberate their next market actions, which has traditionally made courts and competition authorities wary of standard setting operations. Participants may engage in anticompetitive behavior by taking advantage of the standardization process. People involved may conspire to fix prices or boost production. Additionally, they may try to eliminate competition from the market by using the standardizing process.⁹⁷ Participants may keep their competitors' technology out of the standard by limiting who can participate in the standardization process or by picking and choosing which technologies to include.”

Also, if standards end up being practically necessary to join the industry, certain players may try to block other businesses from entering the downstream market by imposing their standards on them. So, "standardization activities might be considered unlawful under competition law, particularly under Article 101 TFEU in the EU and Section 1 of the Sherman Act in the United States. "Standardization agreements also have substantial pro-competitive implications, as economists have argued.⁹⁸ By facilitating the integration of goods from several producers, standards may expand customer choice and simplicity of use. This is especially the case in "network markets," where the quantity of buyers who adhere to a certain standard raises the products perceived worth to each individual buyer. Additionally, Standards may make it easier for customers to move systems and prevent them from being trapped in one.”⁹⁹

When standards make it harder to differentiate products, price competition heats up.¹⁰⁰ Producers benefit from standards. As a result of standards, manufacturers may redirect

⁹⁷ European Commission, X-Open Group § No L 35 (OJ 1986)

⁹⁸ H. J. Hovenkamp, “Standards Ownership and Competition Policy” 48 *Boston College Law Review* 87 (2007).

⁹⁹ A. Soininen, “Patents and Standards in the ICT Sector: Are Submarine Patents a Substantive Problem or a Red Herring?” *International Journal Of It Standards And Standardization Research* 5 (2007).

¹⁰⁰ R. Schmalensee, “Standard-Setting, Innovation Specialists, and Competition Policy” 57 *The Journal Of Industrial Economics* 526 (2009).

their efforts into creating end-user applications rather than competing formats, which in turn lowers the unit cost of manufacturing. This is because economies of scale or gauge can take place. Thus, efforts to standardize may encourage creativity.

Last but not least, "international standards play a crucial role in facilitating trade among states, an effect that is particularly welcomed in the EU context given its positive effects on the development of the internal market." This is because trade between states is greatly aided by these standards. The competition law perspective on standard-setting is consistent with economic theory. Whether in the United States or the European Union, courts and competition authorities have acknowledged that establishing standards may be compatible with competition aims and have a significant pro-competitive impact on the market. In "the Guidelines on the Applicability of Article 101 of the EC Treaty to Horizontal Cooperation Agreements (2001 Guidelines), where a special section was devoted to standardization agreements," the European Commission voiced this opinion.¹⁰¹ It is very improbable that the standardization agreement would have significant anticompetitive implications provided the procedure is carried out in accordance with certain procedural requirements, such as transparent and unrestricted participation, according to the Commission. Therefore, it's rather improbable that it will cause Article 101 TFEU to be used. U.S. courts have also acknowledged the potential for standardization agreements to have positive impacts on competition. This led to the clarification that although standardization agreements do not in and of themselves violate antitrust laws, the impact of such agreements may be assessed rationally.

5.2 SEP CHALLENGES

Patent ambush is another major factor that leads to SEP litigation, though this issue has been mostly resolved through different court rulings and SSO's intellectual property policies. The disputes primarily revolve around balancing the FRAND terms and determining royalty rates in accordance with FRAND terms. Among the most common types of issues that courts must resolve is when a SEP owner seeks injunctive remedy, which goes against the FRAND requirements.¹⁰² Neither the

¹⁰¹ European Commission, Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Cooperation Agreements § C (2010) 9274/2, 263 (2010).

¹⁰² Michael A. Carrier, A Roadmap to the Smartphone Patent Wars and FRAND Licensing, 2 CPI Antitrust Chronicle 2 (Apr., 2012)

Intellectual Property laws nor the Competition laws expressly forbid the owner of a SEP from suing for an injunction in the event of a patent infringement, but neither legislation prevents a patent holder from doing so. Nevertheless, when the SEP owner agrees to license the patent according to the FRAND terms, then everything changes. When the SEP owner has complete control over the standard, any implementer who wants to use the standard must obtain a license from the SEP. If either the implementer or the SEP owner and implementer are unable to negotiate the FRAND terms, the biggest risk is a court injunction suit, which we will talk about later on.

The reason for this predicament is worth investigating. As previously said, the usual protocol for an SSO requires members to voluntarily disclose, and if the patent is chosen as a SEP, it must be leased on FRAND conditions. Although this is not always the case, there are instances when a company trying to get an unfair edge may withhold certain information. In such cases, the implementers will be the ones to bear the brunt of royalty requests and accusations of infringement.¹⁰³

Is it a violation of Section 3 and 4 of Competition Laws, Article 101 and Article 102 of TFEU, or Section 1 of the Sherman Act, among others, if the SEP owner does not adhere to the FRAND principle? This is the next important question that arises. Since the purpose of the FRAND conditions is to prevent the SEP owner from abusing their dominant position, it follows that any action that goes against these requirements would be considered a breach of competition law.

5.3 COMPETITION ISSUES IN STANDARDISATION

In fields like wireless devices, standardization is a foundational component for innovation. When the patent of the SEP holder is incorporated in the standard, problems begin.

His knowledge of his own indispensable and irreplaceable contributions to the information and communication technology (ICT) sector leads him to engage in anti-competitive behavior that harms the public interest. Being aware of the privileged position that SEP holders have, he tries to use it to his fullest potential, even resorting

¹⁰³ Damien Gera din, "Pricing Abuses by Essential patent Holders in a Standard-Setting Context: View from Europe" 76(1) *Antitrust Law Journal* 329-357 (2009).

to anticompetitive tactics on occasion. The holder of a SEP engages in a variety of anti-competitive practices. Their discussion may be seen below.

5.3.1 FAILURE TO DISCLOSE: PATENT AMBUSH

It is up to the SEP owners to decide during Standard Setting whether they are willing to license their patent on FRAND terms. Because any such pledge will have a major impact on the standard-setting process; for example, if the SEP is reluctant or unable to issue a patent license on FRAND terms, the SSO will be forced to seek for alternatives or eliminate the features that the SEP is asking. It would have been possible to avoid problems with the SEP's implementation if the SSOs had time to find solutions before the program began. If, however, no suitable alternatives were available when the standard was being incorporated, and the SEP owner chooses not to commit to FRAND because the technology in question is the only one available, this is called a refusal to commit.

Although the SEP owner's objective was crystal evident in the first two cases, there is a third scenario in which their intentions are less apparent. Patent The term "ambush" describes a scenario in which a member of the SSO knowingly withholds information pertinent to the standard-setting process from a company that owns a patent (either pending or intends to file a patent application) and then later sues the SSO, claiming that the adopted standard infringes on their patent. Members of several SSOs, including IEEE and ANSI, are required to sign a declaration before beginning any process. This declaration either states that the member is unaware of any patents related to the standard that their firm may have or identifies any patents that the member is aware of. This is seen as a violation of competition or antitrust laws in the United States and the European Union. Rambus, the infamous mystery¹⁰⁴ relates to the case of Patent Ambush, in which Rambus secretly held patents and patent applications pertaining to Dynamic Random Access Memory (DRAM) chips—the industry standard—and later sought royalties for these patents and applications, even though they were relevant to technology that was eventually incorporated into the JEDEC standard. "Which prohibits the abuse of dominant position by dominant undertaking" — that is, in direct opposition to Article 102 of the Treaty on the Functioning of the

¹⁰⁴ Rambus, COMP/38.636, Eur. Comm'n, [2010] OJ C30/17

European Union. "First, that there must have been an intentional failure to disclose patents before the adoption of the standard. Second, that alternative technologies or substitutes would have been selected if the failure to disclose had not occurred. Third, that the industry was locked into the standard due to significant investments made before the patent holder revealed the patents. Fourth that the firm acquired a dominant position and was able to exploit it." These are the principles that the European Commission built to address such issues."

This same matter was brought before the US Federal Trade Commission ("FTC"), which determined that "the failure to disclose amounted to unilateral exclusionary conduct, "Since the deceit does not become apparent until after the standard has been locked in, the commission went on to say that misleading behavior takes on a new connotation in a standard setting.

The DC circuit, however, turned down the ruling. "In the absence of deceptive acts, it might be difficult to demonstrate that a differing standard might have been adopted," the court said, stating that the FTC had relied on inadequate evidence and failed to satisfy the burden of exclusionary behavior.¹⁰⁵ The Circuit Court's ruling in *NYNEX Corp. v. Discon Inc.* emphasized prior arguments.¹⁰⁶ "When the harm could be attributed to the legitimate exercise of monopoly power, it wasn't sufficient to demonstrate fraudulent behavior in addition to harm to the consumers in order to establish an antitrust violation."

All SEP holders are aware of the standard's significance and the potential profits it offers. The case of *Dell v. FTC* occurred¹⁰⁷ Here, Dell withheld its patent information until after SSO had already created a standard based on it. The VL-bus standard is a way for data instructions to be sent inside an operating system and its related peripherals; the FTC claimed that Dell threatened to use its secret patent rights against other computer companies who embraced this standard. Dell was accused by the FTC of misleading the relevant standards-setting organization (VESA) about its patent position, which led to restrictions on competition, higher costs to implement the bus design or competing designs, and a decrease in participants' willingness to participate

¹⁰⁵ Richard Schmalensee, "Standard-Setting, Innovation Specialists and Competition Policy" 57(3) *The Journal of Industrial Economics* 526-552 (2009).

¹⁰⁶ *NYNEX v. Discon*, 525 U.S. 128 (1998)

¹⁰⁷ *DELL v. FTC*

in standards-setting activities. This was a violation of Section 5 of the FTC Act, according to the FTC.

Dell said that it had no intellectual property rights (IPRs) that may be infringed upon by the V-L bus standard when VESA requested its members to do so during the standard development process. As a condition for reaching an agreement on the standard, all parties promised to either license any rights that may affect it at a fair and reasonable price or to not own any intellectual property rights (IPRs) that could prevent others from creating technology linked to that standard. In a settlement reached with the FTC prior to any decisions being made, Dell consented to refrain from enforcing its patent rights against computer manufacturers that met the established standard. Additionally, it agreed to refrain from doing so for a duration of ten years regarding any patent rights that it willfully concealed during the standard-setting process.

5.3.2 PATENT HOLD-UP

Included SEPs become industry standards, which locks them into the standard. Companies that "thereby control the product or service market to which the standard relates" can then engage in anti-competitive practices, such as "holding-up" users after the standard is adopted by refusing to license the necessary intellectual property rights or by extracting excessive royalties, preventing effective access to the standard.'¹⁰⁸

A patent holdup occurs when the standard's licensee is required to pay extra fees or royalties demanded by the SEP holders above what is required by the FRAND provisions. To reduce the hold-up issue, SSOs aim to promote early disclosure of standard-essential patents. In order to make devices compatible with other firms' goods and marketable, it is recommended that they employ standards. Once a standard is approved and has economic value, it becomes unchangeable and permanent. Since the licensee is left with no other choice than to comply, this strengthens the position of the SEP holder, who may then take advantage of it. The patent holdup issue also emerges when the SEP holder attempts to exert undue influence on the licensee by charging unreasonable royalty rates. The patent holder may use his dominant position

¹⁰⁸ Colleen V. Chien, "Holding up" and "Holding Out", *available at*: Holding Up and Holding Out by Colleen V. Chien SSRN (Last visited on March 20, 2020)

to seek larger royalties than when the invention was not integrated as a standard unless the SSOs take the lead in assuring compliance with the FRAND licensing conditions.

Manufacturers would be in a bind if patent holders' growing market dominance caused them to seek exorbitant royalties compared to the ex-ante baseline. To be more specific, SEP owners operate in an opportunistic manner, preying on the makers' vulnerability. After incurring irretrievable expenditures to implement the SEP, potential licensees no longer have access to any marketable alternatives that are similar (i.e., technologies that provide interconnection and interoperability). Therefore, there are two prerequisites for holdup: the owner of the SEP must be opportunistic and the technology must be difficult to switch to. Competition study has led authorities to conclude that this distortion is undesirable as the post-competition growth in the market dominance of SEP owners is not due to merit-based competition.

According to Chappatte's theory, the problem of hold-up arises from a SEP holder's power to "block companies from producing any products compliant with the standard" and "to demand royalties for its patent that are significantly higher than the royalties it could have demanded had the technology not been included in the standard, or before the standard was adopted and competition eliminated." When it comes to mobile telecommunications standards, the situation is much worse.

Presented with a holdup problem, a manufacturer is presented with five options.¹⁰⁹:

- “(i) accept the SEP owner’s royalties above the reasonable rate;
- (ii) take the matter to court or participate in alternative dispute resolution (ADR) to settle the disagreement over fair terms;
- (iii) invest in inefficient technology that won't improve product quality (for example, using an outdated technology in his product to avoid paying too much in royalties);

¹⁰⁹ Alexander Galetovic, Stephen Haber, *et.al.*, “An Empirical Examination of Patent Hold-Up” 11 *Journal of Competition Law & Economics* 549- 557(2015)

- (iv) go for vertical backward integration, buying all the necessary SEPs, though some think that can cause rivals to get a leg up;
- (v) risk costly litigation by infringing on the SEP. Either the expense will be absorbed by profit margins, cutting into R&D spending for future innovation cycles, or it will be passed on to customers in the form of increased gadget pricing.

In the long term, these five difficult alternatives would reduce market entry potential, competition, and incentives to develop while increasing costs in the short run throughout the whole sector in which this company operates.

In principle, holdups may occur due to the basic character of SEPs. However, economics and legal academics disagree on whether holdups really represent a systemic issue in reality. There is a lot of theoretical work that suggests SEPs let their owner's slow innovation by charging more than their actual incremental contribution to the end product. The possibility that a patent infringement injunction might benefit the licensor at the expense of consumers is a factor that leads some to that view. However, there are those who point out that the prices of SEP-dependent items (like smartphones) have dropped at far faster rates than those of non-SEP dependent products (like vehicles), and that this suggests that holdup is not really happening. Consequently, there are those who argue that SEP owners really experience reverse holdup and holdout issues, rather just patent ambushes and holdups, which they see as more significant concerns in reality.

Due of the absence of a FRAND-related vacuum, such scenarios have persisted even after a commitment to FRAND. A "hold-up" in India, such to the one involving Micromax, might compromise the reliability of standard-setting efforts and impede the competitive process of selecting technology. In the end, the burden of paying for these patents falls on the consumers.

Another kind of anti-competitive activity that has not yet received distinct recognition is the use of non-disclosure agreements (NDAs). In these cases, the holders of SEPs oblige the licensee to sign an NDA in order to prevent the licensee from disclosing the royalty rates to potential future licensees. In SEP litigations, this act of secrecy gives

rise to concerns about competition. Royalty payments based on research and development costs are anticompetitive as the technology in question competed with several others for the opportunity to become industry standard. By heightening market uncertainty, the holdup issue or threat might impede innovation. In a different sense, the holdup issue discourages companies from participating in the standard-setting process, which in turn hurts consumers since they end up paying more for the product.

5.3.3 REVERSE HOLD-UP/ HOLD OUT

The people tasked with implementing the SEP might potentially create an inverse holdup issue as well. Specifically, capitalizing on the fact that SEP holders have already invested in R&D and are therefore unable to deviate from the standard, They might take advantage of situations when they see fit. The terms "holdout" and "reverse holdup" describe these actions. Forcing SEP owners to accept royalties below the value of their technology' contribution to a standard is an example of reverse holdup, in which licensees use their clout to demand rates and conditions below what is acceptable.

Implementers have to worry about competition in the downstream market for devices by the time license arrangements are considered, which occurs after the standard has been created. Therefore, it appears that SEP holders seldom encounter reverse holdup situations. When patent owners with SEPs are no longer competing with one another, the converse occurs (hence, the holdup risk). So, if the royalties demanded by a SEP owner are unreasonable, the implementers who use the SEP to make devices that compete with each other could refuse to get licenses. This would put pressure on the SEP owner to lower the royalties to what was expected before the innovation (group dynamics).

Then, SEP owners may be less likely to invest in R&D in the future, which might mean less money for customers to spend when they want to buy new products. The strength of the downstream market, however, creates a significant incentive for individual implementers to go against the grain and take the early royalties in order to guarantee they are the first to market. But if there was just one implementer, he would have more leverage in negotiations (reverse holdup), which would make the holdup problem smaller for implementers but bigger for SEP owners; thus, he could refuse to

accept the agreement because the SEP owner couldn't get royalties without him. Licensees engage in holdout when they either do not accept licenses on fair conditions or wait too long to do so. Therefore, they will continue to infringe on SEPs without paying fair royalties for the foreseeable future until ordered to do so by a court or arbitrator. Blanket rejections are seldom in reality. No, holdout manifests itself in many ways.

As an example, there is the desire to negotiate each SEP independently, the fear of legal action for unreasonable royalties, and the question of whether or not SEPs are genuine. Also, never-ending court battles, appeals, and related procedures. Because its prevalence is so difficult to ascertain, I am unaware of any empirical research that attempts to answer the question of whether holdout is a genuine problem. What one side sees as an attempt to drag out the process is, in reality, a fight against royalties that are too high. Plus, the impact of this holdout technique remains an open subject, even if certain implementers may be engaging in it.

The first consequence is that companies are less likely to invest in innovations that are relevant to standards when holdout is in place; this may be the case in the two examples given. One, as the costs of financing rise with fewer cash flows, SEP owners who are financially limited organizations may be discouraged from investing in more research if they are not paid quickly, even when a court or arbitrator orders them to do so (including back interest). Given that patents are becoming more liquid assets, one way for tiny SEP holders to circumvent this impact is to monetize contested SEPs by selling the rights to bigger SEP holders or non-profit entities. In the second case, the implementer's insolvency makes it unlikely that he will be able to pay any royalties or interest that have accrued due to the delay. The legal systems in the United States and Europe, however, have safeguards in place to prevent just such a scenario.

For instance, SEP owners may seek for preliminary injunctions, claiming that they'll endure irreparable loss if they wait for the merits ruling and don't get royalties or interest since the implementers are probably going to go bankrupt by then. It is also usual for the court to order the licensee to hold royalties in an interest-bearing escrow account until the case is resolved or a definitive ruling is made. Since the right payments would be given in due course, only cash-constrained SEP owners will have

their innovation incentives eroded. Litigation expenses, which rise in direct proportion to the time it takes to reach an agreement, can be a second consequence of holdout. Because litigation only occurs on a tiny proportion of patents, allowing litigation expenses to be spread across a large number of patents, inventors with big patent portfolios and implementers who employ large numbers of patents do not consider this issue to be important.

Thirdly, implementers who choose not to pay the necessary fees may gain an unfair competitive advantage over their counterparts who do pay. This line of reasoning can only be sustained if the licensee's production determines the amount of royalties paid out, meaning that royalties are determined as a percentage of production or the price, and if the implementers, who are the ones doing the actual work, act in a certain manner. Since not all implementers pay the same amount in royalties, the ones that are still on the fence may be in a better position to undercut their paying competitors' rates and move more units.

Nevertheless, implementers who are delaying should act as though they are already paying the fees that will be due in the future, since each additional unit of the downstream device sold will result in higher royalty payments when the payments are imposed by a judge or arbitrator. Competition distortions might occur, nevertheless, since stalling implementers may choose not to act in that manner, as if they were already paying fees, for a variety of reasons. To avoid insolvency, for example, one may reduce the cost of capital raising and, by extension, investment expenses. Also, since they are likely to declare bankruptcy soon or simply because their economic vision is too limited. Preliminary injunctions and the deposition of royalties in interest-bearing escrow accounts are laws that have previously been stated; they would be applicable in the final two circumstances as well, to avoid unfair competitive advantages.

In the end, only SEP holders who are strapped for cash would have a hard time finding more innovation because of holdout. Litigation expenses would rise for sole proprietors with limited patent portfolios as their resources couldn't be distributed across several patents. The only implementers who may benefit from a reduction in investment expenses are those with poor financial positions; they are the ones for whom bankruptcy is a genuine possibility. Consequently, when the financial situation

of the people responsible for implementing the SEP and owning it is quite excellent, there won't be any major consequences related to holdout. Legal regulations would reduce the impact of holdout in many countries, however there may be exceptions.

5.3.4 ROYALTY BASE

To calculate the royalty due to a patent owner whenever a product makes use of a patented feature, the royalty base is the products or components selling price. When the royalty's basis is chosen without bias or mistake, the royalty value becomes appropriate. Rather than only imposing royalty on the component that makes use of the SEP, it is common practice for SEP holders to levy royalty on the net selling price of the finished product. All parts of a product will be subject to royalty collection, regardless of whether SEP is used in only one. When the licensee or implementer is required to pay the royalties on the complete product, the whole idea of the FRAND term becomes meaningless. U.S. courts have often used the Smallest Saleable Patent Practicing Unit (SSPPU) methodology to determine the product component's royalty basis. Which part of the final product—the price of the finished good or its smaller components—should be subject to the royalties base is a topic of continuing contention. In the United States, IEEE policy attempted to follow SSPPU. Nonetheless, there is some overlap between the two methods, and they both provide helpful guidance for the FRAND analysis. *Histories v. Cornell University*¹¹⁰

A lawsuit was launched against HP by Cornell University for infringement. The infringed patent pertained to a method of "instruction issuing" that allowed computer microprocessors to execute several instructions concurrently, therefore increasing their processing speed. The instruction reorder buffer (IRB) was the subject of the invention. IRBs are a component of computer processors; many of them are assembled into CPU modules, which are further assembled into CPU bricks, which are then placed onto cell boards, which are inserted into servers. The Court determined that the processor should be the only recipient of royalties due to its status as the "smallest saleable infringing unit with close relation to the claimed invention." Damages were estimated to be \$53 million, with a base of \$7 billion in processors and a rate of 0.8%. The court recently used the Entire Market Value Rule (EMVR) to

¹¹⁰ 609 F. Supp. 2d 279 (N.D.N.Y. 2009)

determine the royalty base in this case, which established more stringent guidelines for calculating royalties in instances involving patent infringement damages. In order to employ the full unit as the royalty base, the court additionally concluded that the EMVR must be fulfilled.

In *AirNet Inc. v. Cisco Systems*¹¹¹, Apple's Face Time and VPN on Demand were found to infringe against four of AirNet's patents in a lawsuit that AirNet had filed against the tech company. Two products were implicated: one was a platform for videoconferencing, and the other was a tool for creating secure VPNs. The amount granted for infringing on the four legitimate patents is \$368,160,000. In its appeal, the Federal Circuit confirmed the jury's decision, but it overturned it and sent the matter back to the trial court to decide how to handle the patent claims that Face time had challenged. The Federal Circuit also discussed the SSPPU, the Nash Bargaining Solution, and other theories of harm assessment that are pertinent to royalty base calculations. *Microsoft v. Unlock*,¹¹² Because it failed to consider the unique aspects of this case, the court in this instance determined that the proposed 25/75 split, sometimes called the "25 percent rule of thumb," is an incorrect way to set a baseline royalty rate in hypothetical discussions. In its decision in *Ericsson v. D-Link*, the Federal Circuit detailed the EMVR's two parts. The first "substantive legal rule" is that the "ultimate reasonable royalty"—that is, the sum of the royalty rate and royalty base—"must be based on the incremental value that the patented invention adds to the end products." Second, the royalty base is determined by a "evidentiary principle" that is intended to "help our jury system reliably implement" the underlying legal rule of apportionment. In spite of CCI's support for the SSPPU in India, the organization has failed to provide the evidence or justification for using this method to rectify the royalty base. In a decision that followed applicable US case law (*CSIRO v. Cisco*) and relied on comparable agreements, the Delhi High Court determined that Ericsson's royalty collection system is FRAND.

5.3.5 ROYALTY STACKING

These are the tech-driven sectors, including automotive, information and communication technology (ICT), which encompasses mobile devices, wife, and

¹¹¹ 767 F.3d 1308 (Fed. Cir. 2014)

¹¹² *Singapore Private Limited v. Microsoft Corp.*, 632 F. 3d 1295 (Fed. Cir. 2011)

laptops. Various organizations control the patents that protect these technologies, and as we've seen, interoperability is crucial for the smooth transfer of information between them. The maker will compete with other owners and negotiate the best price if there are no standards. But once a standard is settled upon, producers will have to find the one piece of technology that no one else is using. Consequently, producers in such circumstances are compelled to get licenses for several patented technologies—hundreds or even thousands of SEPs—in order to construct the finished product.¹¹³

The situation is described by the word as a situation where the total licensing payments are increased due to overlapping royalties. Royalty stacking occurs when a piece of technology that allows something to work incorporates parts that are covered by many patents. The overall price of a multi-component product sometimes goes up because the SEP holders apply the same fee on each component.

Since "essential patents are perfect complements" and "a royalty rate is only make-up since the marginal cost of licensing per unit produced is zero," the telecom industry is considered a prominent example of a sector that might see royalty stacking.

Even though it would lower demand for standard-compliant products, it is presumed that all licensors would impose hefty royalty rates on licensees. The Delhi High Court's ruling that Micromax should pay Ericsson a royalty based on the net selling price of the phone instead of the technology's inherent value was criticized by the CCI in the case of *Micromax v. Intex*. There would be a royalty of Rs. 12.5 if this GSM chip were used in a phone worth Rs. 1000, but just Rs. 1.25 if it were used in a phone priced Rs. 100, according to CCI." Therefore, the rise in the patent holder's royalty has nothing to do with the licensee's product. The maker or licensee has to pay royalties or costs to other patent holders or developers for the numerous additional software, technological capabilities, and apps that make a smartphone more expensive. At first glance, it seems unfair and excessively priced in comparison to high-end phones to charge two separate licensing payments per unit of phone for the same technology.

Royalty stacking, according to one economic theory, would cause licensors to lose money and consumers to pay exorbitant costs. There is a paucity of credible proof and

¹¹³ Mark A. Lemley and Carl Shapiro, "Patent Holdup and Royalty Stacking" 85 *TEX. L. REV.* 1991 (2007)

the issue around royalty stacking is hard to monitor. However, courts take royalty stacking into account when determining whether or not a proposed RAND royalty accurately reflects the technical worth of a copyrighted innovation.

Royalty stacking is anti-competitive since it provides SEP owners greater leverage in negotiations, which implementers have no option but to accept, and thus has an effect on consumers. With an average laptop containing over 270 SEPs, it would be very costly and perhaps antitrust-problematic for the implementer to contact each and every SEP owner.

5.3.6 PATENT THICKET

To ensure that a standard functions correctly, any producer wishing to include the standard must get what are known as "standard essential patents" (SEPs). In a "patent thicket," every single invention patent (SEP) holder is obligated to provide licenses to the producer. Problems emerge if not all SEP holders agree to FRAND license requirements.

Based on what Damien Gera din and Miguel Rato explain, the patent thicket problem stems from the tragedy of anti-commons, which happens when "multiple owners share the rights to property but every one of them has the right to exclude all others" and "the tragedy occurs from underuse."¹¹⁴ Thus, the total number of patents held by all SEP holders serves as a standard. A participant's ability to block the standard's implementation is independent of the significance of their own contribution to the standard. Consequently, in order to implement the standard, "all the SEPs have to be licensed and each SEP holder has to waive exclusive licensing rights to license the particular SEP to any third party." "Applying the anti-commons theory to high technology industries involved in standard setting" is basically what patent thicket is all about."

During the standard-setting stage, the risks of patent thicket may be significantly decreased if all SEP holders agree on FRAND commitments. Since all SEP holders are required to license out their patents, the obligations seem to compel "SEP holders

¹¹⁴ Damien Gera din and Miguel Rato, "FRAND Commitments and EC Competition Law", *available at*: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1527407 (Last visited on November 20, 2022)

to license their SEP in a fair, reasonable and non-discriminatory way," which might solve the issue perfectly. But the truth usually shows a different side. The fact is that numerous issues persist, despite the fact that SSOs often demand a FRAND guarantee from every technology that may be included in the standard. The first is that, when standard-setting occurs, the SEP holder may be reluctant to agree to FRAND conditions if there isn't a similar alternative technology available. However, SSOs must integrate the technology within the standard for the standard to operate. Therefore, SEP holders are not constrained by contract law in the absence of a FRAND agreement. Conversely, patent law grants the exclusive right to the proprietor of a SEP, which might lead to the imposition of discriminatory conditions and disproportionate fees. In this case, SEP holders may have major anti-competitive impacts in the relevant market even if competition laws don't step in. Furthermore, the dangers of patent thicket persist even when parties adhere to FRAND. "When the SEP holder is also a manufacture in the downstream market" is the most common scenario. As a vertically integrated company, the SEP holder might negotiate a licensing arrangement. "Attempt to delay the reach of licensing agreement and expand the timing of licensing negotiations to win the first chance to occupy the market" is one method the company may take.

SEP's efforts are business tactics to dominate the market by prolonging the licensing contract, not FRAND violations. Patent thicket creates the framework for unscrupulous practices like royalty stacking and patent hold-up. Due to the patent thicket's inherent problems, FRAND commitments are insufficient to address relevant standardization risks. Further investigation into specific types of problems, an examination of how FRAND prevents such problems, and an assessment of whether FRAND alone is sufficient are all needed.

5.3.7 INJUNCTIVE RELIEFS

Patent infringement remedies include court-ordered injunctions that remove infringing products off the market for a certain period. Injunctive relief is typically available to patent holders. Injunctions are "ordered by national courts." to deter IP infringement. IP Enforcement directives state that "Member States shall ensure that, where a judicial decision is taken finding an infringement of an intellectual property right, the judicial authorities may issue against the infringer an injunction aimed at prohibiting the

continuation of the infringement." IP owners may seek injunctive remedies to halt infringement."¹¹⁵

However, "an injunction sought by SEP holders for FRAND-committed IP is very controversial" here. SEP holders usually promise that their SEPs are accessible to anybody who adopts the standard and is willing to enter into FRAND licensing agreements with them when they license their technology. SEP holders may seek or threaten injunctions to prohibit certain implementers from using their SEPs. Anti-trust problems may arise with injunctions. "By making a FRAND commitment an essential patent holder waives its right to seek injunctions in case of infringement," say scholars. But in this case, the producer doesn't have to pay a fee to get a license; they may utilize whatever patent they want without violating it.

In most cases, once a SEP owner has agreed to the FRAND provisions, they are tacitly giving up their ability to pursue injunctions, as doing so would constitute a breach of the FRAND rules. It seems that unauthorized users are in the worst possible position, since the only recourse with the SEP Owner is a "ex post damage claim."

If the petitioner would incur irreparable harm as a result of the non-grant of injunction, then the injunction should be granted. The problem is that licensors have been abusing it by using it to charge licensees exorbitant royalties and make them pay them in order to prevent infringement lawsuits. Since SEP is adequately compensated under the FRAND royalty provisions, this conduct is obviously in violation of the FRAND rules. This clearly violates antitrust or competition rules as it is an abuse of dominance.

The first plan before approving is to have the uncooperative licensee pay the SEP holder the FRAND royalty rates that the court has decided upon, in cases where monetary damages are insufficient. The concepts of equity form the basis of particular remedy legislation in India. If the injunction is misused, it might hurt the licensee's or SEP implementer's market share and bottom line. Under top of that, licensing under FRAND conditions is an inevitable part of being an SSO member. It is only in such circumstances when the licensor suffers irreparable harm that an injunction may be

¹¹⁵ Directive 2004/48/EC of The European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights [2004] OJ L 157, Article 11.

obtained, regardless of how low the royalty is. The holders of SEPs often prevail when they sue the people responsible for implementing the SEPs for breach of contract. Pursuing injunctions based on SEPs is considered an abuse of a dominant position, which is forbidden by EU antitrust rules. In cases involving SEPs and licensees who are ready to accept FRAND conditions, the use of injunctions, although a potential remedy for patent infringements, may be oppressive. Under these conditions, injunctions may skew licensing discussions and force patent licensees to accept unfair terms, which hurts consumer welfare.¹¹⁶

The US Faculty of Justice's Antitrust Division, the FTC, and the European Commission's Competition Directorate General all have a stake in this issue. SEP holders typically use injunctive remedies and consider market power when opting to agree into a FRAND license with an implementer, which influences their judgments. Patent delays increase when a company uses SEPs to hinder competitors.

The court in *Apple v. Motorola*¹¹⁷ said, "... When a patent is essential to a standard, the patent holder has more influence since a prospective licensee is reliant on the patent.

Either consumers will pay more in royalties and have those costs reflected in increased pricing or injunctive remedy would reduce product availability, both of which are bad for consumers.

Injunctive remedies should be reserved for extreme cases involving FRAND and SEP disputes, according to the unanimous decision of the competition authorities. Since the competition authorities have presumptively found the licensee to be prepared to adhere to FRAND terms, they must provide him an opportunity to resolve any disputes that may develop.

Several scholars have argued that competition authorities and courts should prohibit injunctive relief to avoid further detrimental impacts on SEP research and development, and the Delhi High Court's decision to grant injunctive relief to Ericsson against SEP implementers in various SEP-related disputes lends credence to this position.

¹¹⁶ *Samsung v. Apple*, District Court Of The Hague, March 14, 2012, Doc. No. 400367/Ha Za 11-2212

¹¹⁷ *Apple Inc. v. Motorola, Inc. And Motorola Mobility, Inc.*, U.S. Dist. Ct., W.Dist. Wisc. 2010-10-29

5.4 JUDICIARY ON INJUNCTIVE RELIEF IN FRAND ENCUMBERED LITIGATION

The Court begins by referencing previous decisions to back its claim that "the right to seek injunctions as an exercise of an exclusive patent right for normal IP holders, itself will not constitute an abuse of dominant position" when dealing with relevant issue. When it comes to a "standard essential patent," whose owner can "prevent products manufactured by competitors from appearing or remaining on the market," and a FRAND commitment that "creates legitimate expectations on the part of third parties that the proprietor of the SEP will in fact grant licenses on such terms," it's possible to argue that refusing to license the specific SEP constitutes an abuse according to Article.

Having said that, certain legal and factual considerations are required. Firstly, this case emphasizes that "the Court upon identifying an abuse of dominant position lays emphasis on the exclusionary nature of seeking injunctions, rather than exploitative one." The court may determine that SEP holders are engaging in exploitative practices if they seek or threaten to seek injunctions to extract unfair, unreasonable royalties or impose discriminatory licensing terms. Alternatively, their conduct may be deemed exclusionary if it prevents competitors from entering the relevant market, ultimately harming consumers by reducing competition, in line with Article 102.

In this particular case, the court will not investigate whether "other trading parties apply dissimilar conditions to equivalent transactions" (Article 102(c)) or assess "whether the royalties charged by SEP holders are reasonable or excessive, or if the purchase or selling prices imposed on consumers are fair or reasonable" (Article 102(a)).

The court's ruling emphasizes that the essential nature of SEPs makes their use indispensable for all competitors. Consequently, SEP holders have the potential to monopolize the market by effectively blocking existing or potential competitors. Such patent holdups could significantly impact consumers, downstream markets, and rivals by restricting access to industry standards.

At the same time, the court acknowledges that national courts may issue injunctions to protect patents as legitimate exclusive rights. However, the court distinguishes

between FRAND-encumbered SEPs and SEPs without FRAND obligations. This differentiation arises from the FRAND commitment, which involves the waiver of certain exclusive licensing rights. Consequently, injunctions become less applicable when the SEP holder has already committed to licensing on FRAND terms.

In establishing key conditions for SEP-related disputes, the court outlines the following steps:

1. **Notice of Infringement:** The SEP holder must first notify the alleged infringer in writing, explaining the reasons for the claim, specifying the relevant SEP, and detailing how the infringement has occurred. This ensures neither party exploits the other's position of power.
2. **Written License Offer:** The SEP holder must then provide a written license offer that includes all industry-standard terms, specifying the royalty amount and the methodology used to calculate it.

The responsibility does not rest solely with the SEP holder. The potential licensee must demonstrate genuine intent by acting diligently and seriously in response to the offer. If the initial offer is rejected, the licensee must submit a reasonable counteroffer in writing, identifying the contested terms.

In evaluating the negotiation timeline, the court emphasizes the need to consider the "commercial window of opportunity" available for the SEP holder to secure a reasonable return on its patent investment. If the potential licensee is already utilizing the SEP without payment, negotiations should proceed swiftly to ensure timely resolution.

Although the Advocate General's guidance offers clear procedures for both parties, some unresolved questions remain. For instance:

- Can the Court or Commission define or adjust FRAND commitments?
- How far can competition authorities intervene in defining FRAND terms or even provide a general framework for them?
- Would the outcome differ if the entire patent portfolio is considered?

- Can a party demand a global licensing agreement under these conditions?

These uncertainties highlight the complexities that persist despite the Court's attempt to establish clearer guidelines.

Dispute between Motorola and Samsung

The Motorola and Samsung cases, based on the court's judgment, expand upon the principles established in the Huawei v. ZTE case, providing more detailed and practical guidelines for seeking injunctions by FRAND-encumbered SEP holders. The Motorola case's first-instance court, aligning with the CJEU's key conclusion, ruled that Motorola's injunction against Apple on FRAND-encumbered GPRS SEPs violated Article 102 TFEU and Article 54 of the EEA Agreement.

The court emphasized that a potential licensee's willingness to litigate a FRAND rate indicates its intention to enter into a licensing agreement and fairly compensate the SEP holder. Following Huawei v. ZTE, the Commission issued further guidance in the Motorola and Samsung cases, reinforcing these principles.

In the Motorola case, the court concluded that Motorola's pursuit and enforcement of an injunction against Apple infringed Article 102 TFEU and Article 54 of the EEA Agreement, reinforcing the CJEU's core finding. The ruling also highlighted that a prospective licensee's readiness to allow a court to determine a FRAND rate demonstrates a genuine commitment to securing a licensing deal and fulfilling payment obligations.

Samsung had previously committed to licensing its SEPs on FRAND terms. However, the Commission found that Samsung's attempts to seek both preliminary and permanent injunctions against Apple had the potential to (i) exclude Apple, a competing UMTS-compliant device manufacturer, from the market, and (ii) pressure Apple into accepting unfavorable licensing terms. This was not deemed an outright abuse of dominance but raised concerns about anti-competitive behavior.

The lawsuit against Samsung was dismissed after the Commission rejected Samsung's argument that Apple's alleged unwillingness to enter a license agreement justified its actions. The Commission acknowledged Samsung's intellectual property rights while

balancing factors such as public interest in fair competition. Both judgments reflect the Commission's alignment with the CJEU's view that SEP holders seeking injunctions may engage in anti-competitive behavior. The Commission reached this conclusion after analyzing Motorola and Samsung's dominant market positions, the long-term anti-competitive impact, and various objective justifications.

The cases underscore the importance of potential licensees' willingness to negotiate on FRAND terms. The Motorola ruling highlights that SEP holders who have committed to licensing on FRAND terms cannot seek injunctions unless the prospective licensee refuses to engage in good-faith negotiations. Similarly, the Commission's evaluation in Samsung's case stressed the need for balanced behavior from both SEP holders and prospective implementers.

To ensure fairness, both parties must demonstrate equal motivation to negotiate in good faith. Litigation risks increase if this balance is compromised. While both cases involve Article 102 violations, Motorola's decision found the SEP holder lacking in fair conduct, while Samsung's decision identified issues on the prospective licensee's side. The Commission's ruling in the Motorola case also established a "safe harbor" for licensees willing to resolve disputes through the courts and pay appropriate royalties. Consequently, injunctions are justified only when a party refuses to engage in this safe harbor framework.

5.5 ROLE OF SSO'S IN SEP LITIGATIONS

Standard setting organizations (SSOs) should take a more active role in patent selection and litigation prevention. Currently, SSOs serve as a forum where experts from various fields can come together to discuss and ultimately choose a patent for a technology. After the patent is chosen, the parties involved are free to negotiate the license terms according to the FRAND principle, but SSOs are not involved in this process.

That is why it is crucial for Indian SSOs to get prominent figures in the sector to join their ranks. Ericsson and other foreign companies must voluntarily join Indian SSOs and adhere to their intellectual property regulations. For SSOs to guarantee that no member is infringing on copyrighted technology and that market participants are

licensing proprietary standards on FRAND terms, this is a necessary condition. Private SSOs defining SEP standards would be inappropriate given its novelty in India. Government leadership is essential. Thus, government SSOs and government-recognized SSOs must participate in standard-setting and FRAND licensing terms. Courts and the CCI must recognize SSOs' relevance and require them to participate in licensing disputes. SEP's murky area surrounding FRAND clauses conflicts with IP and competition laws. Patent ambush occurs when a SEP owner claims his patent rights after the standard has been created, which violates FRAND. Another issue is the royalty base: the SEP owner wants to charge for the product, while the producer just wants to pay patent value royalties. In other instances, the courts have tried to create a balance, however this is ridiculous since the issue is FRAND and market value economics. Many academics believe that the price issue should be handled before creating the standard since there's no guarantee it would be commercially successful.

The decisions above seek to explain the court's approach to injunctive relief challenges, but parties may only find a mutually accepted conclusion via SSO mediation. Injunctive relief is only an issue when the parties fail to negotiate FRAND terms, which can happen for any reason. These matters must be resolved through mediation or negotiation because the patent owner's right cannot be taken without allowing him to threaten the other party.

5.6 SEP ENCUMBERED LITIGATION AND COURTS

The courts have an important role to play in this area since their findings on FRAND criteria and the validity of royalty offers determine the status quo practically overnight. By making sure that patent infringement judgments are reasonable, the courts may prevent royalty stacking and holdup. The contribution of the patented innovations and the expenses of any other intellectual and physical inputs necessary for the manufacture or sale of the infringing product must be considered. For this reason, it is necessary to distribute the benefits of the standards themselves rather than those of other people's efforts, such as patents that are essential to other standards. This is critical for patents that are fundamental to a standard yet seem to be violated by products that use the standard. At this time, the parties may seek injunctive action and set the royalty basis via the courts. The courts have consistently dealt harshly

with SEP owners who disobey FRAND standards and have been involved in SEP-encumbered litigation over the years. For their violations of the FRAND agreement's terms of service, companies including Microsoft, Motorola, and Samsung have been fined millions of dollars by the courts. Furthermore, if doubt arises, the courts may play a pivotal role in settling the matter by defining FRAND terms.

5.7 JUDICIAL INTERPRETATION IN THE U.S.

GEORGIA-PACIFIC'S FIFTEEN FACTOR¹¹⁸ As a scale to evaluate the appropriate royalties in patent infringements cases, the George Pacific case, which was determined in 1970 in the Southern District of New York, is established in the United States.

This scale was established in the United States. In the matter at hand, the court listed fifteen criteria that should be considered when setting an acceptable royalty rate. The following is a list of the factors:

1. The royalties that the patentee got for the licensing of the patent that is the subject of the lawsuit, which indicate or tend to prove that a set royalty was obtained.
2. The fees that the licensee should pay in order to make use of other patents that are equivalent to the patent that is being challenged.
3. Details about the license, such as whether it is non-exclusive or exclusive, regionally limited or unrestricted, and about the persons to whom the manufactured goods may be sold.
4. The licensor's plan to safeguard its patent monopoly via policy and advertising. One way to do this is to issue licenses to other parties, but only under certain conditions designed to protect the monopoly. Another way is to simply not grant licenses to anybody at all.
5. The nature of the financial relationship between the two parties, such as whether they are competitors in the same market or not, as well as other factors like shared roles as innovators or promoters.

¹¹⁸ Georgia-Pacific Corp v. U.S Plywood Corp., 318 F. Supp. 116 (S.D.N.Y. 1970)

6. Considerations include the invention's present worth to the licensor as a sales generator for its non-patented goods, the volume of sales of such derivatives or convoyed items, and the effect of selling the patented specialty on the licensee's other product sales.
7. The length of time that the patent will be valid and the duration of the license.
8. The demonstrated profitability of the product that was manufactured using the patent, as well as its economic success and the popularity it now enjoys.
9. The usefulness and benefits of the intellectual property in comparison to the older methods or techniques, if any, that had been used in the past for the purpose of achieving outcomes that were comparable.
10. The patented innovation's nature, the features of the licensee's commercial implementation of the invention, and the benefits experienced by users of the system.
11. The extent to which the infringement has made use of the innovation, together with any evidence that might validate the usefulness of the invention's use.
12. The percentage of the profit or selling price that is often seen in the particular industry or among comparable businesses to authorize the usage of the invention or similar developments.
13. The percentage of profit or selling price that is often used to license innovations or similar ideas in the relevant industry or industries with similar products or services.
14. A percentage of the revenues or selling price that is customary in the relevant industry or among similar businesses to authorize the use of the invention or comparable developments.
15. The percentage of the revenue or selling price that is often associated with the innovation or comparable innovations in the relevant industry or with businesses that are comparable to it.

For fair royalty rates inside SSOs, this decision will serve as a precedent for any future patent infringement trials, which are often seen as the first step in using

F/RAND Terms. However, the Court did not specify how royalties were to be calculated.

Rambus Case¹¹⁹ Rambus, a chip manufacturer and participant in the Joint Electron Engineering standard-setting process, was one of the first instances of the idea of Patent Ambush. In the case of SD-RAM, it exits the process before finishing it.

Following Rambus's withdrawal, JEDEC members vowed to exclude proprietary technology from the standard. However, Rambus then added patent filings that attempted to incorporate much of the standard into its own portfolio.

After the standard had been in development and released to the public for a while, Rambus "ambushed" a number of companies responsible for putting it into practice.

Ebay Inc. Case¹²⁰ In situations where the district courts found patent validity and infringement, the Federal Circuit Court had already imposed the compulsory injunction rule, which obligated them to grant injunctions.

In this case, the highest court in the land disagreed with the Federal Circuit's decision to give a permanent injunction and instead ruled that no specific statute authorizes such a remedy in circumstances of technology infringement.

This four-factor exam was given by the court: - A The side requesting the injunction must prove four things:

- 1) it has suffered an irreparable injury;
- 2) it does not have adequate remedy at law;
- 3) an equitable remedy is warranted after balancing the hardships between plaintiff and defendant; and
- 4) A permanent injunction serves the public interest. These principles also apply to the Patent Act.

¹¹⁹ Rambus Inc. v. FTC, 522 F.3d 456 (2008).

¹²⁰ Ebay Inc. v. Merc Exchange, L.L.C 547 U.S. 388 (2006)

Apple Inc. Case¹²¹ Both Motorola Mobility, Inc. and Motorola, Inc. are defendants in two patent infringement cases that Apple brought to the Western District of Wisconsin. In its action against Motorola, it claimed violation of six patents and sought monetary fines and an injunction. In 2010, the International Trade Commission received a new patent infringement lawsuit between Motorola, Inc. and Motorola Mobility. Supposedly, Apple possessed three patents that were used by Motorola phones marketed in the US. In an effort to stop Motorola from creating and import these phones, Apple took legal action. In a November 2010 counterclaim, Motorola accused Apple of infringing upon eleven patents that had previously been asserted in the Northern District of Illinois. It was moved from the Western District of Wisconsin to the Northern District of Illinois, involving six Apple patents and three Motorola Mobility patents.

As a counterclaim, Apple brought up Motorola's breach of its FRAND licensing commitments to IEEE and ETSI. After looking into the case, the court concluded that Motorola may seek injunctive relief since no agreement stopped them from doing so. Because the SSO's IP laws do not address the right to seek injunctive remedies, it cannot be denied to the patent owner. Since the terms of the agreement were vague, Motorola cannot be held in contempt for allegedly breaking them. Despite Apple's 2012 appeal to revisit the decision, the court ultimately ruled against the company.

Microsoft Corp. Case¹²² Microsoft Corp. sued Motorola Inc., claiming that the latter had violated the FRAND restrictions, which it had benefited from as a third party. Microsoft sued Motorola, asserting its right to FRAND licensing of Motorola patents, and sought a declaratory judgment for breach of contract. The standards set by the IEEE and the ITU, as well as the royalty rates determined by the courts, rely heavily on these patents. When Motorola first made a licensing offer, Microsoft thought it was ridiculous. Motorola sued Microsoft in a German court in 2011 on patent infringement claims. Upon receiving an injunction from a German court, Motorola was able to prevent Microsoft from selling infringing smartphones in the country.

In Germany, Microsoft attempted to get a patent infringement injunction against a lawsuit. Subsequently, Motorola transferred the patent infringement allegations it had

¹²¹ Apple Inc. v. Motorola, Inc. And Motorola Mobility, Inc., U.S. Dist. Ct., W.Dist. Wisc. 2010-10-29

¹²² Microsoft Corp. v. Motorola Inc., 696 F. 3d 872 (9th Cir. 2012).

originally brought in the Western Area Court of Wisconsin against Microsoft to a different action, which Motorola subsequently confirmed. With Microsoft facing accusations of infringement, Motorola sought injunctive relief. Microsoft was ruled to be an outside party that received licenses to use Motorola's technology on RAND terms via its obligations to the IEEE and the ITU. As a result, the court denied Motorola's request for an injunction, ruling that the contracts between Motorola and the SSOs were enforceable.

The decision was based on the eBay case. Since Motorola had already promised to give the licenses under FRAND terms—and the court had tried to promote this by settling on a royalty rate—the court found that Motorola had failed to prove either damage or that legal remedies were inadequate. The United States court has never before addressed the definition of FRAND in a case like this one.

Innovation Case¹²³ and addressed several subjects, such as incentive compatibility, patent holdup, royalty determination, and the basic principles of FRAND innovation, which altered the trajectory of US patent law with respect to SEPs. An LLC asserting patents on wireless internet technology sued several companies throughout the US, including groceries shops, cafés, hotels, restaurants, big-box retailers, transportation providers, and more. The nineteen patents that the respondents were found to have violated were considered essential to the IEEE 802.11 Wi-Fi standard. Innovation requested a charge from each participant ranging from \$2500 to \$3000 per the license agreement.

Furthermore, Innovation proceeded with legal measures by filing infringement lawsuits against the parties who rejected its licensing offer in several federal courts. At the same time, an injunction finding that the challenged patents were invalid and not violated was sought by five of WIFI equipment's most notable suppliers in a declaratory judgment litigation against Innovation. The Northern District of Illinois JPML merged these cases in preparation for trial. Since all nineteen of Innovation's patents were essential to the industry standard, Judge Holderman ruled that they were required for the RAND period according to IEEE's policy on intellectual property rights.

¹²³ In re Innovation IP Ventures, LLC, 921 F. Supp. 2d 903, (N.D. Ill. 2013).

5.8 JUDICIAL INTERPRETATION IN EU

Case by Motorola the Commission ruled that Motorola violated EU competition laws when it used one of its SEPs to enforce injunctions against Apple, a voluntary licensee. What makes this case different from a "normal" patent infringement case led the Commission to its determination. To start, Motorola had previously said that the 2G ETSI standard's implementation was dependent on the patent it was suing over. Second, it promised the third party a license under the FRAND licensing conditions. Third, Apple consented to have the German courts determine the relevant FRAND rate and pay royalties in accordance with that rate in the event of a dispute. Based on the Motorola judgment, a prospective licensee's desire to pay the SEP holder enough money to engage into a licensing agreement is shown by their consent to have the FRAND rate determined by a judge in the event of a disagreement. Consequently, a SEP holder shouldn't try to protect its company interests by getting an injunction. As a result of the injunction it obtained and executed in Case AT.39985-Motorola—execution of GPRS standard essential patents, Commission Decision on 29 April 2014, Apple here relinquished its ability to challenge the validity and infringement of Motorola's SEPs. Concerns about patent infringement and validity are highly correlated with those of the public interest. Unused or invalid SEPs may cause manufacturing costs to rise needlessly, which in turn drives up consumer prices. More over 30% of invalidity cases in Europe end with the challenged patents being explicitly invalidated, while around 50% of challenged patents are deemed not to have been infringed.

Samsung Case¹²⁴ the Samsung lawsuit involves allegations of infringement that have been brought before courts in Germany, Italy, the Netherlands, the UK, and France. By implementing a variety of 3G SEPs that Samsung had consented to license under FRAND terms, these courts want to block the sale of certain Apple products. In response to the inquiry by the Commission, Samsung has promised that, for the next five years, it would not litigate any prospective licensee in Europe over mobile device SEPs unless that licensee agrees to a specific licensing plan. After the obligatory 12-month licensing negotiation period, the parties may choose to have a third party decide the FRAND terms via arbitration or court, whichever is preferred. Based on

¹²⁴ Case AT.39939-Samsung - Enforcement of UMTS standard essential patents, Commission Decision of 29 April 2014

the duties, it is evident that the arbitrator or court has to think about whether licensed SEPs are legal or infringing. The Commission will consult with a neutral trustee to ensure that Samsung delivers on its commitments.

Huawei Case¹²⁵ The Regional Court of Düsseldorf referred the matter to the Court for preliminary consideration. Here, Huawei had warned ZTE that their goods would violate its LTE (or "4G") patent portfolio and had requested that the latter get a license. ZTE proposed a royalty-free cross-license in response to Huawei's product, claiming that it would violate ZTE's patents. Afterwards, Huawei filed a lawsuit against ZTE, and the court in Düsseldorf chose to refer five issues on the relevance of EU competition law to the case to the Court of Justice.

First, the court wanted to know whether a SEP owner who promised to license on FRAND terms was abusing its dominant position under Article 102 TFEU by trying to get an injunction against a licensee who was open to negotiating FRAND terms.

In order to determine if a prospective licensee is willing to do business, please refer to questions 2–4. In question 5, we inquire as to what degree the same factors are relevant to alternative remedies for patent infringement, namely accounting, product recalls, and damages. Since ZTE had not sought a license in good faith, the CJEU's ruling implied that it did not think Huawei had exploited its dominance.

However, the CJEU also took into account the potential misuse scenarios in rendering its decision. The CJEU's ruling in Huawei/ZTE establishes a high bar for abuse exclusion and suggests that this bar could be even higher than that previously established in the refusal to provide cases (beginning with Magill). When it comes to this matter, the Huawei/ZTE ruling is the first of its kind from an EU court.¹²⁶

5.9 JUDICIAL INTERPRETATION IN INDIA

Kingtech Electronics (India) Pvt. Ltd Case¹²⁷ This case marked the beginning of SEP litigations in India. Ericsson filed a patent infringement claim with the Customs Faculty in 2011 against items imported into the country by Kingtech Electronics

¹²⁵ Huawei Technologies v. ZTE EU:C:2015:477

¹²⁷ Kingtech Electronics (India) Pvt. Ltd. v. Union of India, W.P.(C) 6878/2011

(India). Customs agents seized packages belonging to Kingtech. The Delhi High Court was approached by Kingtech for redress after the company claimed that the goods had been unlawfully kept by the Customs Faculty. The H.C. granted relief to Kingtech and ordered the release of its goods. Ericson appealed to H.C., asking the Commissioner to make additional orders, after discovering sufficient reasons to assume that the Kingtech product infringed Ericson's patents. same reason, Ericson sought an injunction to prevent Kingtech from making or selling phones that used its exclusive technology. By 2012, thanks to an injunction granted by August H.C., Ericsson had successfully stopped Kingtech from importing devices that used infringing technology.

Micromax Informatics Ltd. Case¹²⁸ In India, SEP litigations started with this case. In 2011, Ericsson went to the Customs Faculty to argue that products smuggled into the nation by Kingtech Electronics (India) infringed on their patent. Brokers from customs took Kingtech's shipment. The Delhi High Court heard Kingtech's case for a refund, since they claimed the Customs Faculty had unlawfully withheld the items. Relief was given to Kingtech and its items were ordered freed after the H.C.'s verdict. After Ericson found proof that the Kingtech product infringed on their patents, they appealed to H.C., requesting more orders from the Commissioner. This prompted Ericson to seek an injunction to stop Kingtech from producing and selling phones that used its proprietary technology. Ericsson was able to prevent Kingtech from importing devices that used infringing technology when August H.C. awarded an injunction to the company in 2012.

Gionee Case¹²⁹ While Micromax was facing litigation in October 2013 over eight SEPs, Ericsson went after Gionee, a well-known Chinese smartphone maker, for infringing on the same patents. The Delhi High Court valued Gionee's interim sales in India at more over 24 million Indian rupees. The rate of royalties was determined by the Micromax lawsuit. Ericsson must be paid by Gionee when its product enters India. They hired this mediator in July 2014 to help them get through their disagreement. In November of 2014, the mediation attempt was unsuccessful. In October 2015, after defining the problems, the court issued its order.

¹²⁸ Micromax Informatics Ltd. v. Telefonaktiebolaget Lm Ericsson, Case No. 50 of 2013.

¹²⁹ Telefonaktiebolaget Lm Ericsson v. Gionee Communication Equipment Co. Ltd. CS (OS) No. 2010 of 2013.

Intex Techs. (India) Ltd.¹³⁰ Similar to the Micromax case, Intex sued Ericsson in 2013 over SEP royalty fees. Additional commentary from CCI is that the behavior of Ericsson forcefully executing the NDA and demanding exorbitant royalties constitutes an apparent abuse of dominating position. It is against FRAND agreements to impose different royalties on different parties. According to CCI, Intex abused its dominating position as the agreement's jurisdictional provision prevented it from hearing cases involving areas where the parties did business. As for this matter, the CCI looked into it. In defense of itself against the CCI investigation, Ericsson petitioned the Delhi High Court via writ. Additionally, it sued Intex, alleging patent infringement and a damage sum of 56 crores rupees. With W.P No. (C) 464/2014, Intex petitioned the Supreme Court for a special leave. For the purpose of determining the Royalty rate between the parties, the S.C. sent the case to the Delhi High Court and ordered it to ascertain the CCI's authority to undertake the investigation..

Xiaomi Case¹³¹ After Micromax, Gionee, and Intex infringed on Ericsson's prior patents, the company sued Xiaomi in December 2014. Phones made by Ericsson were well-liked by consumers because to their affordability, functionality, and performance. The lawsuit was granted an ex-parte injunction by the Delhi High Court. Mi3, Redmi1S, and Redmi Note 4G—devices geared for the Indian market—were said by Xiaomi to include Qualcomm chipsets, which used technology licensed from Ericsson. Nevertheless, earlier versions had chipsets manufactured by MediaTek, a company that does not have a licensing deal with Ericsson. Based on this, Xiaomi was able to successfully contest the injunction and keep selling the product, but only under two conditions: (1) they could only sell smartphones based on Qualcomm technology, and (2) for every infringing product they imported to India, Xiaomi would have to put up Rs 100. The court ordered the money to be held in a fixed deposit for the duration of the lawsuit, which was to be three months. Xiaomi and Ericsson reached an agreement in June 2015 to return 1, 05,961 unsold Redmi Note 3G phones from the Indian market to its Singaporean consignee. Due to Ericsson's disclosure of certain facts, the Delhi High Court in April 2016 overturned the interim ruling issued in 2014 regarding two 3G patents, IN 229632 and IN 240471. Qualcomm and Xiaomi were already in a "Multi Product License Agreement" (MPLA), according to Xiao MI's

¹³⁰ Intex Techs. (India) Ltd.v.TelefonaktiebolagetLm Ericsson, Case No. 76 of 2013.

¹³¹ TelefonaktiebolagetLm Ericsson v. Xiaomi Technology and Ors, IA 3074/2015 in CS(OS) 3775/2014.

arguments. Qualcomm had a licensing arrangement with Ericsson. Additionally, the lawsuit said that Ericsson had concealed details about the license agreement with Qualcomm in order to get a restraining order.

Lava Case¹³² For allegedly infringing on its AMR, GSM, and EDGE technology SEPs, Ericsson sued Lava Int. Ltd. According to Lava, Ericsson conceals its collaborations with other entities. After exhausting all other avenues for conflict resolution, the parties have now decided to commence litigation. We shall now decide the matter based on its merits.

Vringo v. Zte¹³³ In a patent infringement case that began in November 2013, Vringo—a US-based firm with a large portfolio of patents pertaining to telecommunications technology—sued ZTE, its CEO, and its Indian subsidiary ZTE Telecom India. The case centered on a standard CDMA technology. The Delhi High Court has issued an injunction preventing ZTE from making, importing, selling, using, or advertising devices that infringe. When ZTE appealed the injunction in December 2013, they were victorious. Details of the gadgets supplied in India were ordered along with a bank guarantee payment of Rs. 5 crores. A Scientific Advisor was appointed by the H.C. to help the court in this subject. The patents that were infringed upon were purchased from Nokia.

Vringo v. Zte¹³⁴ Another infringement complaint was launched in January 2014 by Vringo and Vringo Infrastructure against ZTE and its Indian affiliate as well as product reseller Indiamart. The infringement, according to Vringo, was on its 3G and 2G patents. To stop ZTE from importing, marketing, and promoting infringing products, the court issued an ad interim ex-parte injunction in February 2014. Customs officials were ordered to confiscate shipments belonging to ZTE that included infringing gadgets, and local commissioners were sent to examine ZTE's facilities. After a successful appeal of the injunction in March 2014, the court ordered ZTE to deposit 178.5 million with them. The court rejected Vringo's expert opinion and instead created a committee of three professors to give the court their verdict.

¹³² CS(OS) No.764/2015

¹³³ Vringo Infrastructure Inc. and XuDejun and Ors, CS(OS) No. 2168/2013.

¹³⁴ Vringo Infrastructure Inc. Indiamart Intermesh Ltd. and Ors., CS(OS) No314/2014.

Vringo v. Asus¹³⁵in Asustek Computer Inc. was sued by Vringo in April 2014 for allegedly infringing on non-essential patents. It said that Google owned or leased the infringing technology. Google was become a party to the case in August 2014. In an effort to stop Asus from using the technology in India, Vringo sought an injunction. No temporary restraining order or injunction has been issued while the matter is still before the High Court.

Its World Class Case a total of eight GSM and WCDMA-related patents were infringed upon, according to Ericsson's 2011 notification to Best IT World. Both sides were asked to comply with a Global Patent Licensing Agreement (GPLA) for all patents that were infringed upon. In order to establish the validity of the asserted patents, Best IT proposed to enter into an agreement with Ericsson, but Ericsson refused to release them. All sales, past and future, of the items should be covered by the licensing agreement, according to Ericsson. Following the breakdown of discussions, Best IT took legal action by filing a complaint with the CCI in September 2015. The complaint was based on Ericsson's alleged dominance abuse, as stated in Section 4 of the Competition Act, 2002.

When it comes to harmonizing and balancing IP and competition concerns, the courts have played a crucial part in SEP encumbered litigation, the introduction of the George Washington standards, and the Orange Book system. Even if the courts have dealt with Standards concerns before. For a long time, US courts have dealt with this kind of thing; in the landmark decision of *US v. Terminal Railroad Association* , the court ruled that this kind of thing violates the Sherman Act and is antitrust. The court's approach to handling such cases has developed over time. But the most significant problem is that court decisions do not follow any particular pattern.

Regarding India, the matter is still developing, despite the fact that the Delhi High Court is handling numerous SEP-encumbered lawsuits. In one case, the SEP owner is suing for damages and an injunction, claiming patent infringement; in another, the manufacturers have lodged a complaint with the CCI, asserting that the SEP owner is abusing his dominant position by charging excessive royalties and refusing to enter into a license agreement on FRAND terms.

¹³⁵ C.S. (OS) No.314 of 2014

It would be intriguing to see how courts handle similar cases in the future, whether they continue to entertain them or encourage parties to resolve their differences via mediation or arbitration.

5.10 SOME LATEST CASE LAW

The concept of Standard Essential Patents (SEPs) and Fair, Reasonable, and Non-Discriminatory (FRAND) licensing has gained significant importance in the modern technological landscape, particularly in industries such as telecommunications, smartphones, and digital infrastructure. With the rapid evolution of global markets, courts across jurisdictions have increasingly played a crucial role in standardizing fairness in SEP licensing. Recent case law from 2024 to 2026 reflects a clear shift toward a more structured and regulatory approach, ensuring transparency, accountability, and balance between patent holders and implementers.

Judicial Recognition of Global FRAND Licensing

One of the most significant developments in recent jurisprudence is the recognition of courts' authority to determine global FRAND licensing terms. In *Lenovo v InterDigital*, the court affirmed its jurisdiction to adjudicate cross-border SEP disputes and determine FRAND rates on a global scale. This case is important because it reinforces the idea that fragmented national approaches can lead to inconsistent outcomes, whereas a centralized judicial determination promotes uniformity and predictability.

Similarly, in *Amazon v InterDigital*, the court rejected jurisdictional objections and allowed claims for global FRAND rate determination. This case further strengthens the notion that national courts can act as global regulators in SEP disputes, thereby contributing to the standardization of fairness across jurisdictions.

Emergence of Interim Licensing Mechanisms

Another major development in recent case law is the emergence of interim licensing mechanisms to ensure fairness during ongoing litigation. In *Samsung v ZTE*, the court granted an interim FRAND licence, allowing the implementer to continue using the patented technology while the dispute was being resolved. This approach prevents

disruption in business operations and ensures that neither party suffers undue harm during prolonged legal proceedings.

Further, in *Lenovo v Ericsson*, the court emphasized that a willing licensor must offer an interim licence as part of good faith negotiations. This decision highlights the importance of procedural fairness and ensures that SEP holders do not exploit their dominant position to delay or deny access to essential technologies.

Strengthening of Good Faith Negotiation Standards

Recent case law has also emphasized the necessity of good faith negotiations between SEP holders and implementers. Courts have moved beyond merely assessing whether negotiations took place, to examining the quality and sincerity of such negotiations. In *Nokia v Hisense*, the court held that SEP holders must make a concrete FRAND offer that is capable of acceptance, rather than engaging in vague or strategic negotiations. This development is significant because it transforms FRAND obligations from a procedural requirement into a substantive legal duty. It ensures that both parties actively participate in meaningful negotiations, thereby reducing the risk of opportunistic behavior such as patent hold-up or hold-out.

Balancing Patent Rights and Injunctive Relief

The issue of injunctions in SEP disputes has long been controversial, particularly in balancing the rights of patent holders with the need for fair access to technology. In *Philips v Belkin*, the Unified Patent Court granted a permanent injunction in favor of the SEP holder after finding non-compliance with FRAND obligations. This decision illustrates that while fairness is essential, it does not undermine the enforceability of patent rights. The case demonstrates that courts are willing to grant injunctive relief where implementers act in bad faith or refuse to accept FRAND terms. Thus, the regulatory framework seeks to maintain equilibrium by protecting both innovation incentives and market accessibility.

Role of Competition Law in SEP Regulation

Competition law has increasingly intersected with SEP and FRAND disputes, particularly in addressing abuse of dominance. In *Competition Commission of India v*

Monsanto Holdings Pvt. Ltd., the court recognized the role of competition authorities in scrutinizing licensing practices that may distort market competition.

Earlier Indian cases such as *Micromax v Ericsson* and *Ericsson v Xiaomi* also highlighted concerns related to excessive pricing and unfair licensing terms. These cases collectively emphasize that SEP licensing must not only comply with patent law but also adhere to competition principles to prevent anti-competitive practices.

Shift Towards Enforceable Regulatory Standards

A key trend emerging from recent case law is the transition from voluntary compliance to enforceable regulatory standards. Courts now treat FRAND commitments as binding obligations rather than mere guidelines. The requirement of transparent licensing terms, fair pricing mechanisms, and non-discriminatory practices reflects a move toward institutionalizing fairness within the legal framework.

This shift is particularly important in industries dependent on standardized technologies, where unequal access can hinder innovation and market competition. By enforcing strict compliance with FRAND principles, courts contribute to the development of a predictable and equitable licensing ecosystem.

CHAPTER 6

ROLE OF JUDICIARY

6.1 OVERVIEW

The rapid advancement of technology and the increasing dependence on standardized systems have made Standard Essential Patents (SEPs) a crucial component of modern innovation. SEPs refer to patents that protect technologies which are indispensable for complying with established industry standards, particularly in sectors such as telecommunications, electronics, and digital infrastructure. These standards enable interoperability among devices and systems, ensuring that products manufactured by different companies can function together seamlessly. As industries become more interconnected and globalized, the significance of SEPs continues to grow. However, the essential nature of these patents also provides patent holders with considerable market power, which creates the potential for misuse. This situation necessitates the development of a structured regulatory framework that ensures fairness and prevents exploitation in licensing practices¹³⁶.

To address these concerns, SEP holders are generally required to license their patents on Fair, Reasonable, and Non-Discriminatory (FRAND) terms. The FRAND commitment is designed to maintain a balance between encouraging innovation and ensuring access to critical technologies. It seeks to protect the interests of both patent holders, who invest significant resources in research and development, and implementers, who rely on these technologies to produce standard-compliant products. The principles of fairness, reasonableness, and non-discrimination collectively aim to create an equitable licensing environment. However, the interpretation of these principles is often complex and context-dependent, leading to disagreements and legal disputes. The ambiguity inherent in the concept of FRAND underscores the need for a clear and consistent regulatory framework.

Standard Essential Patents play a vital role in fostering technological progress and global connectivity. They are incorporated into technical standards developed by standard-setting organizations, which bring together industry participants to establish common guidelines. These standards facilitate innovation by providing a stable

¹³⁶ Basu, A., & Sahoo, A, 'Antitrust Routine in Delineating the Frontier of SEP and FRAND-Encumbered Patents: A Comparative Study' (2023) Competition Commission of India Journal on Competition Law and Policy, 4(1), 41; 76

foundation upon which companies can build new products and services. At the same time, they promote efficiency and consumer welfare by ensuring compatibility across devices and networks. Despite these benefits, the inclusion of patented technologies in standards creates unique challenges. Patent holders may attempt to leverage their position to demand excessive royalties or impose restrictive licensing terms. Such practices can hinder competition and limit access to essential technologies, making regulatory oversight indispensable.

The need for a comprehensive regulatory framework for SEPs and FRAND becomes increasingly evident as the complexity of licensing arrangements grows. In the absence of effective regulation, market participants may engage in practices that distort competition and undermine fairness. A well-defined framework provides clarity regarding the rights and obligations of parties involved in SEP licensing. It establishes mechanisms for determining appropriate royalty rates, resolving disputes, and ensuring compliance with FRAND commitments. The framework typically integrates principles from intellectual property law, contract law, and competition law, creating a holistic approach to regulation. By providing predictability and stability, it enables companies to make informed decisions and reduces the likelihood of conflicts¹³⁷.

The judiciary plays a central role in shaping and enforcing this regulatory framework. Courts are responsible for interpreting FRAND commitments, resolving disputes, and ensuring that licensing practices adhere to legal and ethical standards. Through their decisions, courts establish precedents that guide the behavior of market participants and contribute to the standardization of fairness. Judicial intervention is particularly important in cases where negotiations between parties break down. In such situations, courts may determine royalty rates and licensing terms, thereby providing a benchmark for what constitutes fair and reasonable conditions. This active involvement enhances the effectiveness of the regulatory framework and ensures that it remains responsive to evolving market dynamics.

Despite these developments, the regulation of SEPs and FRAND continues to face several challenges. One of the most significant issues is the lack of uniformity across

¹³⁷ Tripathi, Praveen, 'Standards, FRAND and Competition Law' (2002) *International Journal of Law Management & Humanities*, 5, 829, 854

jurisdictions. Different countries adopt varying approaches to interpreting and enforcing FRAND commitments, leading to inconsistencies and potential conflicts in cross-border disputes. This fragmentation can create uncertainty for market participants and increase the complexity of litigation. Additionally, SEP cases often involve highly technical and economic considerations, requiring courts to engage with complex evidence and expert analysis. Determining appropriate royalty rates, for example, involves assessing factors such as the value of the patented technology, its contribution to the standard, and prevailing industry practices. These complexities can prolong disputes and increase costs.

Another major challenge in SEP regulation is the presence of opportunistic behaviors such as patent hold-up and hold-out. Patent hold-up occurs when SEP holders exploit their position to demand excessive royalties or impose unfair licensing terms after the standard has been adopted. Conversely, hold-out refers to situations where implementers delay or refuse to obtain licenses, hoping to avoid or reduce payment obligations. Both practices undermine the principles of FRAND and disrupt the balance between innovation and access. Addressing these challenges requires a nuanced and balanced approach that discourages opportunistic behavior while preserving incentives for innovation.

In recent years, there has been a noticeable shift towards more structured and transparent regulatory approaches. Courts are increasingly recognizing the need to determine global FRAND licensing terms, reflecting the interconnected nature of modern markets. This development helps reduce fragmentation and ensures consistency in the application of legal principles across jurisdictions. Additionally, the introduction of interim licensing mechanisms allows parties to continue their operations during ongoing disputes, minimizing disruption and promoting stability. There is also a growing emphasis on good faith negotiations, with courts scrutinizing the conduct of parties to ensure compliance with FRAND obligations. These trends indicate a move towards a more proactive and interventionist judicial approach.

The integration of competition law principles into SEP and FRAND regulation represents another important development. Given the market power associated with SEPs, there is a risk of anti-competitive practices such as abuse of dominance and discriminatory licensing. By applying competition law principles, regulators and

courts aim to prevent such conduct and ensure that licensing practices promote fair competition. This integration enhances the overall effectiveness of the regulatory framework and aligns it with broader economic objectives. It also reinforces the importance of transparency and accountability in licensing arrangements¹³⁸.

Standardizing fairness within the SEP and FRAND framework is essential for sustaining innovation and promoting economic growth. A consistent and transparent regulatory system ensures that all market participants have equal access to essential technologies, thereby fostering competition and reducing barriers to entry. It also protects consumers by preventing excessive pricing and ensuring the availability of affordable products. Furthermore, standardization reduces legal uncertainty and litigation costs, enabling companies to focus on innovation rather than disputes. By establishing clear guidelines and consistent practices, the regulatory framework creates a stable environment that supports long-term development.

6.2 JUDICIAL INTERPRETATION OF FRAND COMMITMENTS

Standard Essential Patents are of significant value in the implementation of technologies aligned to specific standards, as applied in mobile communication and Wi-Fi. They are termed “standard essential” because it is impractical to produce or market products so aligned with such standards without integrating the patented technology into the product. Thus, SEPs define boundaries across various sectors, which fosters technological advancement as well as access to global markets. Due to their ability to create monopolistic conditions, SEP owners have to fulfill FRAND obligations. These are aimed at obliging SEP owners to provide licenses under fair and reasonable terms that eliminate distortive exploitation of market power and ensure fair access to crucial technologies. FRAND remains a rather ambiguous term, however, and varied interpretations are witnessed depending on jurisdictions in terms of enforcement. The European Union has developed a broad legal framework that includes SEPs and FRAND obligations with clear standards and an established body of jurisprudence, giving the SEP licensing dispute a stable and predictable environment.

¹³⁸ Devarhubli, G. D., ‘Interface between FRAND licensing of standard essential patents (seps) and competition law: issues and challenges’ (2020) 11(2) IJLJ,115-141

In contrast, India still continues to develop a comprehensive legal regime for SEPs and FRAND compliance. Recent judicial pronouncements have placed an important emphasis on holding onto FRAND terms; however, such interpretations are often found to be away from international norms, especially as they are prevalent in the EU. Such a situation will pose considerable hurdles for multinational corporations operating within India and in the EU with varying legal landscapes. This paper examines differences with respect to the FRAND commitments and the SEP enforcement in India and in the EU, such as differences in substantive law, case law and enforcement practice. The analysis will also evaluate the effects of these differences on innovative activity, competition, and access to technology around the world. In addition, the research aims to elaborate on the models of the law of both countries, which could help to improve the enforcement of SEPs and compliance with the FRAND terms so that SEPs can be regulated effectively and efficiently worldwide¹³⁹.

The European Union has a governance of SEPs resting on a rather complex legal framework, which brings provisions under the EU treaties, regulations, directives, and jurisprudence. This is sure to be in equilibrium between promoting innovation, the rights of intellectual property, and competitive market dynamics. It was founded upon fundamental treaties, directives and regulations as well as on the latest reforms that came and went in building the European SEP legal framework, appearing seemingly equitable and transparent to rivalry. It has opened some puzzles above the very question of FRAND, innovations, as well as various and contrasting interests of right owners as well as right user interests.

The European Patent Convention was established as an integrated scheme to provide patent protection to all member countries. This marked the introduction of obtaining protection for patents under the jurisdiction of all these states using a harmonized process where one application could only be filed with the EPO, European Patent Office. Although the EPC does not include SEPs, the EPC has provided a legal basis for the protection of inventions when those inventions were subsequently found to be essential to technical standards. SEPs, being patents essential to the use of standardized technologies, base their principles on patent law as crystallized in the

¹³⁹ Henkel, J., 'Licensing standard-essential patents in the IoT: A value chain perspective on the markets for technology' (2022) Research Policy 51(6), 104600

EPC. As all patents granted under the EPC were of exceptionally high quality concerning novelty, inventive step and industrial applicability, the framework serves as a starting point for innovation protection regarding EU standards.

IPRED 2004/48/EC ON ENFORCEMENT OF INTELLECTUAL PROPERTY RIGHTS The IPRED directive is known otherwise as Directive 2004/48/EC. It is the directive that harmonizes intellectual property rights throughout the whole area of the EU through the structuring of provisions on civil measures and remedies for infringement of IP rights. Accordingly, it is essential for SEPs, for IPRED to be able to empower SEP holders to enforce their rights in the proper balance and, at the same time, achieve such balance between the protection of these rights and not overdoing them to the point of stifling competition or innovation. To crown it all, IPRED further demands the principle of proportionality so that measures of enforcement must be proportionate to the nature of the infringement and the wider public interest. This factor is especially relevant for SEPs applied in standardized products¹⁴⁰.

The Brussels I Recast regulation relates to issues of jurisdiction relating to cross-border patent disputes, which also encompasses disputes over SEPs. Since setting standards and using them all over the world is an international issue, the directive is an important tool of jurisdiction within the EU patent disputes. It enforces rules to be used to recognize judgments and enforce those judgments between member states for more transparency and predictability of litigation. This regulation ensures that the rights of the SEP holders can be enforced uniformly, while for the implementers, it gives a clear procedural framework through which to contest claims in the appropriate jurisdiction.

6.3 DETERMINATION OF FRAND LICENSING TERMS

Today's liberalized economy survives on the merits of innovation. Naturally, inventors are entitled to protect their creations and enjoy the rewards of their labor. These privileges and rights are recognized through the grant of patents. Patents are essentially monopoly rights bestowed upon human inventors by governments for a limited period of time¹⁴¹. Upon the expiration of this period, this creation can be freely

¹⁴⁰ Li, B. C., 'The global convergence of FRAND licensing practices: towards "interoperable" legal standards' (2006) 31 BTLJ, 429,466

¹⁴¹ Soni P & Koundinya S, Taking the FRAND-ly approach: A first look at FRAND battles in India, January 2015.

manufactured and sold. The owners are free to license or sell off their patents to third parties. Likewise, non-owners can enter into legally enforceable negotiable agreements with the patent-holders to earn access to the patented product.

As the world welcomes newer inventions, it becomes imperative for certain technical standards to be set in order to ensure consistency in the quality of products. A standard can be defined as a document which provides requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services which are fit for their purpose. A practice popularized during the Industrialization of the West, standardization ensures compatibility and interoperability in the international marketplace. It would be impossible for mobile phone operators, computer manufacturers and even television receivers to function without such interoperability.

Standard essential patents are “patents essential to implement a specific industry standard. This means that it is impossible to manufacture standardcompliant products such as smartphones or tablets without using technologies that are covered by one or more standard essential patents (SEPs).”In the case of *Microsoft v Motorola*, the Court defined a given patent to be essential to a standard if use of the standard requires infringement of the patent, even if acceptable alternatives of that patent could have been written into the standard.

Standard setting organizations (SSO) are entrusted with the responsibility of monitoring the interactions between competing companies in arriving at the appropriate technical standards, ensuring transparency and inclusive decision making at every stage. The Institute of Electrical and Electronic Engineers (IEEE) and International Telecommunication Union (ITU) are prominent SSOs in the cellular and Wi-Fi space.

FRAND licensing was introduced to ensure that SEP-holders are bound to the standard-setting organizations by their commitments of fairness and reasonableness and prevented from obstructing technological development. However, there is considerable dispute regarding the objective standards qualified by the FRAND

<http://www.iam-media.com/Intelligence/IAM-Yearbook/2015/Country-by-country/Taking-the-FRAND-ly-approach-a-firstlook-at-FRAND-battles-in-India> (accessed on 28 May 2015).

commitments. The first prong deals with ‘reasonableness’. Some experts are of the view that the royalty claimed should be equal to the incremental value of the standardized technology, when compared to its alternatives. There are other proponents who argue that the royalty should target that component which is majorly responsible for the functionality of the patent. This is often referred to as the ‘smallest saleable patent practicing unit’¹⁴².

FRAND royalty rates were determined for the first time in the case of *Microsoft Corp v Motorola Inc*, that involved the 802. Wi-fi standard and H. video coding standard developed by the IEEE and ITU respectively. Delivering a landmark judgement, Justice Robart considered a hypothetical negotiation setup, consistent with the Georgia Pacific factors. According to this approach, the negotiations between the licensor and the licensee prior to the adoption of the standards are taken into account. The Court added that the FRAND royalty rates should commensurate with the value of the technology added to the overall standard.

Once the patented standard receives commercial acceptance, it becomes locked in since the licensee is obligated to implement the standard. Most SEP-holders exploit this patent hold- up to their advantage. Patent hold- ups can be averted by prompt intervention of the SSO’s. However, courts are best equipped to determine the most reasonable royalty rates, evaluating the benefits of the product and the equity considerations involved.

Lately, SEP-holders have begun to engage in unfair practices such as royalty stacking in order to extract unreasonable royalties. Royalty stacking refers to the addition of royalty for each of the components of an SEP. While this is a logical and natural phenomenon in most wireless technology, royalty stacking becomes worrisome when the royalties for each component are compounded to achieve a higher aggregate than the price of the product itself. As a result, the licensee cannot bear the licensing fee while maintaining a reasonable profit margin. However, some manufacturers have been blamed for keeping profit margins too low. Recent litigations also demonstrate the lack of genuineness in royalty stacking claims, with most defendants failing to convince the judges of its actual harm. Scholars have compared the system of FRAND

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licensing to that of a joint venture that is headed by the standard setting organizations, equating the FRAND commitments to ancillary restraints that are necessary for the collective success of the joint venture. Evolved through the course of common law, the Doctrine of Ancillary Restraint permits few firms to collectively restrain competition, as a trade-off for the greater good of productive efficiency. There is no doubt that mainstream economics sees patent as a tool for granting monopoly to patentees. The underlying assumption of this notion, inspired by the Schumpeter Doctrine, is that monopoly profits are the only means of incentivizing invention since the rents generated from competitive pricing are not sufficient enough to cover the expenses incurred on research and development. However, this assumption is laden with discrepancies that require deliberation.

6.4 ADDRESSING CHALLENGES IN JUDICIAL REGULATION

The regulation of Standard Essential Patents (SEPs) and Fair, Reasonable, and Non-Discriminatory (FRAND) licensing presents significant challenges for the judiciary. As technological innovation becomes increasingly complex and globalized, courts are required to address disputes that involve intricate legal, economic, and technical considerations. While the judiciary plays a central role in ensuring fairness and enforcing FRAND commitments, it also faces numerous obstacles that hinder the development of a consistent and effective regulatory framework. Addressing these challenges is essential for maintaining balance between the rights of patent holders and the interests of implementers and consumers.

Jurisdictional Conflicts and Lack of Uniformity

One of the most pressing challenges in judicial regulation is the lack of uniformity across jurisdictions. Different countries adopt varying approaches to interpreting FRAND commitments, leading to inconsistencies in legal standards and outcomes. This divergence creates uncertainty for market participants, particularly in cross-border disputes involving global licensing agreements. Courts may assert jurisdiction over worldwide FRAND terms, which can result in overlapping decisions and potential conflicts between legal systems. Addressing this challenge requires greater international coordination and harmonization of legal principles to ensure consistency and predictability in SEP regulation.

Technical and Economic Complexity

SEP disputes often involve highly technical subject matter and complex economic analysis. Courts must evaluate the essentiality of patents, determine appropriate royalty rates, and assess the contribution of patented technology to industry standards. These tasks require specialized knowledge that may not always be readily available within the judiciary. As a result, courts rely heavily on expert testimony, which can lead to conflicting opinions and prolonged litigation. To address this challenge, there is a need for greater use of specialized tribunals, technical experts, and structured methodologies for assessing FRAND terms.

Determination of Fair and Reasonable Royalties

Determining what constitutes a “fair and reasonable” royalty remains one of the most contentious issues in SEP litigation. There is no universally accepted method for calculating FRAND rates, and courts often adopt different approaches depending on the circumstances of each case. Methods such as the top-down approach, comparable licensing analysis, and incremental value assessment each have their own limitations. The absence of clear guidelines can result in inconsistent outcomes and increased litigation costs. Addressing this issue requires the development of standardized methodologies that enhance transparency and reduce uncertainty in royalty determination.

Balancing Patent Rights and Competition Concerns

The judiciary must strike a delicate balance between protecting the rights of patent holders and preventing anti-competitive practices. SEP holders possess significant market power due to the essential nature of their patents, which can lead to concerns about abuse of dominance.

At the same time, overly restrictive regulation may discourage innovation by undermining the incentives for research and development. Courts must carefully assess whether licensing practices comply with FRAND obligations while also adhering to competition law principles. Achieving this balance is critical for ensuring that the regulatory framework promotes both innovation and fair competition.

Addressing Patent Hold-Up and Hold-Out

Patent hold-up and hold-out represent two major challenges in SEP licensing. Patent hold-up occurs when SEP holders exploit their position to demand excessive royalties or impose unfair licensing terms after the adoption of a standard. Conversely, hold-out refers to the reluctance or refusal of implementers to obtain licenses, often to delay or avoid payment. Both practices disrupt the balance intended by FRAND commitments and create inefficiencies in the market. The judiciary addresses these issues by evaluating the conduct of parties and enforcing good faith negotiation standards. However, developing clear criteria to distinguish between legitimate and opportunistic behavior remains a challenge.

Delays and Inefficiencies in Dispute Resolution

SEP litigation is often lengthy and resource-intensive, resulting in delays that can negatively impact both parties. Prolonged disputes create uncertainty, disrupt business operations, and hinder technological progress. The complexity of cases, combined with procedural requirements and reliance on expert evidence, contributes to these inefficiencies. To address this challenge, courts are increasingly adopting measures such as interim licensing arrangements and expedited procedures. These approaches help ensure continuity in the use of technology while disputes are being resolved, thereby minimizing disruption and promoting fairness.

Global Nature of SEP Disputes

The global nature of SEPs presents unique challenges for judicial regulation. Standards are applied internationally, and products incorporating SEPs are distributed across multiple markets.

This creates a need for coordinated approaches to licensing and dispute resolution. However, differences in legal systems, enforcement mechanisms, and policy objectives complicate this process. Courts must navigate these complexities while respecting principles of territorial jurisdiction.

Addressing this challenge requires greater collaboration between jurisdictions and the development of frameworks that accommodate the global nature of SEP licensing.

Need for Transparency and Predictability

A lack of transparency in licensing practices and judicial decision-making can undermine the effectiveness of the regulatory framework. Uncertainty regarding royalty rates, licensing terms, and dispute resolution processes creates challenges for market participants. The judiciary plays a key role in enhancing transparency by providing clear and reasoned judgments that articulate the principles governing FRAND obligations. Consistent application of legal standards improves predictability and reduces the likelihood of disputes. Developing publicly accessible guidelines and encouraging disclosure of licensing practices can further strengthen transparency in the system.

Emerging Solutions and Reforms

To address these challenges, several reforms are being proposed and implemented. The establishment of specialized IP courts and tribunals can enhance the efficiency and expertise of judicial decision-making. The development of standardized methodologies for royalty determination can reduce inconsistencies and improve fairness. Increased reliance on alternative dispute resolution mechanisms, such as arbitration and mediation, can provide faster and more flexible solutions. Additionally, international cooperation and harmonization of legal principles can help address jurisdictional conflicts and promote a more cohesive regulatory framework.

6.5 CASE STUDY

Telefonaktiebolaget LM Ericsson v. Lava International Ltd. (2024)

In this landmark 2024 judgment, the Delhi High Court provided one of the most detailed analyses of SEP infringement and FRAND obligations in India. The Court awarded substantial damages to Ericsson and determined a FRAND royalty rate based on the net selling price of devices, rejecting the chipset-based valuation approach.

The judgment is significant because it establishes a structured method for calculating royalties, relying on comparable licensing agreements. It also introduces the concept of an “unwilling licensee,” thereby discouraging implementers from delaying negotiations or avoiding licensing obligations. Through this case, the judiciary has

contributed to greater certainty and predictability in SEP licensing, marking a major step toward standardizing fairness.

Intex Technologies (India) Ltd. v. Telefonaktiebolaget LM Ericsson (2023)

In this 2023 decision, the Delhi High Court further refined the framework governing FRAND licensing. The Court emphasized that FRAND obligations are mutual, requiring both SEP holders and implementers to negotiate in good faith.

Importantly, the Court laid down a structured negotiation process, similar to international standards such as the European approach in *Huawei v. ZTE (2015)*. It also recognized the legitimacy of interim measures, including royalty deposits and injunctions, where infringement is *prima facie* established. This case strengthens procedural fairness and reduces the possibility of opportunistic behavior by either party, thereby enhancing the transparency of SEP licensing practices.

InterDigital Technology Corp. v. Xiaomi Corporation (2021)

This 2021 case highlights the judiciary's role in addressing the global nature of SEP disputes. The Delhi High Court dealt with issues relating to international licensing and jurisdictional conflicts, particularly through the grant of anti-anti-suit injunctions.

The Court acknowledged global licensing practices while asserting its authority to adjudicate disputes involving Indian markets. This judgment plays a crucial role in preventing forum shopping and ensuring consistency in the enforcement of FRAND obligations across jurisdictions. It demonstrates how courts contribute to harmonizing domestic law with international standards, which is essential for maintaining fairness in a globalized technology ecosystem.

Telefonaktiebolaget LM Ericsson v. Xiaomi Technology (2014)

In this 2014 case, the Delhi High Court introduced the concept of interim royalty payments during the pendency of litigation. The Court directed Xiaomi to deposit royalties on a per-device basis, ensuring that the patent holder is compensated while the dispute is ongoing. This approach reflects the judiciary's effort to balance competing interests by preventing unjust enrichment of implementers without

prematurely deciding the final royalty rate. It laid the foundation for subsequent cases by establishing temporary mechanisms to maintain fairness during legal proceedings.

Competition Commission of India v. Monsanto Holdings Pvt. Ltd. (2020)

This 2020 Supreme Court decision is significant in understanding the intersection between competition law and patent law. Although not limited to SEPs, the case has broader implications for FRAND licensing by addressing the potential abuse of dominant position by patent holders.

The Court clarified that competition authorities have a role in examining licensing practices, ensuring that patent rights are not exercised in a manner that distorts the market. This reinforces the principle that FRAND commitments must align with competition law, thereby preventing excessive pricing or discriminatory licensing.

Judicial Role in Standardizing Fairness in SEPs and FRAND

The above cases collectively illustrate the expanding role of the judiciary as a regulatory force in SEP and FRAND disputes. Courts have moved beyond traditional adjudication to actively shape the principles governing licensing practices. They establish clear methodologies for royalty determination, define the obligations of both parties, and ensure that negotiations are conducted in good faith.

Furthermore, the judiciary plays a crucial role in balancing the rights of innovators with the need for technological access. By addressing issues such as patent hold-up and hold-out strategies, courts ensure that neither party exploits its position unfairly. Judicial decisions also contribute to global harmonization, aligning Indian practices with international standards while maintaining domestic legal autonomy.

CHAPTER 7

CONCLUSION, RECOMMENDATIONS AND FUTURE SCOPE

7.1 CONCLUSION

A comprehensive regulatory framework for Standard Essential Patents (SEPs) and Fair, Reasonable, and Non-Discriminatory (FRAND) terms is essential in fostering innovation while ensuring fair access to technological standards. As industries increasingly rely on interoperability and standardized technology, SEPs play a critical role in advancing sectors like telecommunications, automotive, and electronics. However, the licensing and enforcement of SEPs often present challenges, particularly around balancing the interests of patent holders with those of implementers. The establishment of a standardized approach to SEPs and FRAND addresses these challenges by providing clarity on licensing practices, enhancing transparency, and preventing patent holdup and royalty stacking, which are detrimental to both innovation and competition.

A key aspect of this regulatory framework involves defining what constitutes “fair, reasonable, and non-discriminatory” terms. While the FRAND commitment aims to prevent SEP holders from demanding excessive royalties or engaging in anti-competitive practices, the lack of concrete definitions has historically led to litigation and disputes. By standardizing the criteria for FRAND terms, regulators can reduce ambiguity, guiding negotiations and helping courts make more consistent rulings. This includes setting clear guidelines for calculating royalties based on factors such as the contribution of the SEP to the overall product, the economic value of the patent, and industry norms. Such a standardized approach not only benefits SEP holders by providing a predictable income stream but also allows implementers to budget and plan for SEP licensing costs effectively, supporting a healthier innovation ecosystem.

The study examines the regulatory and legal challenges surrounding the licensing of Standard Essential Patents (SEPs) and the application of Fair, Reasonable, and Non-Discriminatory (FRAND) principles. The research particularly evaluates whether a standardized framework for royalty determination would be more effective than the present case-by-case approach and whether the existing intellectual property and

competition law mechanisms in India are adequate to regulate SEP licensing practices.

With regard to the first hypothesis, the study finds that the present system for determining royalties in SEP licensing largely depends on a case-by-case judicial approach. Courts across different jurisdictions, including the United States, the European Union, and India, adopt varied methods for determining FRAND royalties. These methods include approaches such as comparable licensing agreements, the top-down method, and incremental valuation techniques. Due to the absence of a uniform standard for determining royalties, judicial outcomes often differ significantly from one case to another. This inconsistency creates uncertainty among patent holders and technology implementers and often results in prolonged negotiations and litigation. The findings indicate that the absence of a consistent methodology undermines transparency and predictability in SEP licensing.

The study further reveals that jurisdictions which have adopted more structured and systematic approaches to royalty determination demonstrate greater clarity in the application of FRAND principles. A standardized regulatory model would help establish uniform criteria for royalty assessment, thereby reducing ambiguity in licensing negotiations. Such a framework would also contribute to minimizing disputes between patent owners and implementers by providing clearer guidelines for determining fair and reasonable licensing terms. Therefore, the research concludes that a standardized royalty determination framework is more effective in ensuring transparency, consistency, and compliance with FRAND principles compared to a purely case-based approach. On the basis of these findings, the first hypothesis is supported.

In relation to the second hypothesis, the study finds that the existing intellectual property and competition law mechanisms governing SEPs in India are still evolving and remain insufficiently developed to address all challenges associated with FRAND licensing. India does not currently have a comprehensive statutory framework that specifically regulates Standard Essential Patents and FRAND obligations. Instead, disputes relating to SEP licensing are addressed through the general provisions of patent law and competition law. This fragmented regulatory approach often leads to uncertainty in the interpretation and enforcement of FRAND commitments.

The research also identifies the possibility of abuse of dominant position by SEP holders in the absence of clear regulatory standards. Such practices may include the demand for excessive royalties, discriminatory licensing terms, or the strategic use of injunctions to pressure technology implementers. Although the Competition Commission of India plays an important role in addressing anti-competitive conduct, the coordination between competition law enforcement and patent law adjudication remains limited. Furthermore, compared to regulatory frameworks in jurisdictions such as the United States and the European Union, India lacks detailed guidelines governing royalty determination, licensing negotiations, and the grant of injunctive relief in SEP disputes.

The study also observes that standard-setting organizations operating in India have relatively limited regulatory authority to ensure strict adherence to FRAND commitments. As a result, the enforcement of fair and non-discriminatory licensing practices often depends on judicial interpretation rather than clear regulatory standards. Consequently, the research concludes that the current Indian legal framework does not fully prevent potential dominance abuse nor does it comprehensively ensure fairness and transparency in SEP licensing practices. These findings support the second hypothesis and indicate the need for regulatory refinement and the development of a standardized framework for SEP and FRAND regulation in India.

Overall, the study demonstrates that establishing a more structured regulatory mechanism for SEP licensing, supported by clearer guidelines for royalty determination and stronger coordination between intellectual property and competition law authorities, would significantly enhance transparency, consistency, and fairness in the implementation of FRAND principles. Such reforms would contribute to reducing litigation, promoting innovation, and ensuring balanced protection of the interests of both patent holders and technology implementers.

Transparency is another essential component of a robust SEP and FRAND regulatory framework. Without transparency, it becomes difficult for implementers to determine whether the licensing terms they are offered are truly fair and reasonable. One solution could be the establishment of a public registry of SEP licenses and FRAND commitments, which would increase the visibility of past licensing terms and serve as

a reference point for future negotiations. This database could be managed by a neutral third-party or industry consortium to ensure impartiality. Moreover, a centralized system for registering SEPs would help reduce instances of “over-declaration,” where companies claim SEPs that may not be essential to the standard. By improving transparency and minimizing over-declaration, the registry would provide a more accurate picture of the standards landscape and reduce litigation arising from unclear SEP status.

Another critical consideration is the role of international cooperation in SEP and FRAND standardization. Since technological standards are implemented globally, national regulatory approaches alone cannot address all challenges associated with SEP licensing. Harmonizing SEP and FRAND policies across countries would create a level playing field and mitigate the risk of regulatory arbitrage, where SEP holders or implementers exploit discrepancies in national regulations to their advantage. Organizations such as the World Intellectual Property Organization (WIPO) and international standards development organizations (SDOs) could play a pivotal role in facilitating cross-border collaboration and establishing globally accepted SEP and FRAND principles. This approach would help prevent conflicts between jurisdictions and support the global technology ecosystem by promoting fair and consistent licensing practices worldwide.

The regulatory framework should also address the challenges posed by new and emerging technologies, such as the Internet of Things (IoT) and 5G. These technologies require seamless connectivity and interoperability across various devices and networks, which in turn depends on adherence to widely accepted standards. SEPs are critical in this context, but traditional SEP licensing models may not be well-suited to the complex, multi-component systems that characterize IoT and 5G. Therefore, the framework should incorporate flexible licensing models that reflect the unique demands of these technologies. For instance, “license-to-all” models, where SEP holders license their patents at the component level, could better support the interconnected nature of IoT systems compared to “access-only” models, which limit licensing to end-product manufacturers. By embracing such models, the regulatory framework can encourage widespread adoption of standards while ensuring fair compensation for patent holders.

Dispute resolution mechanisms are also integral to an effective SEP and FRAND framework. Traditional litigation processes can be time-consuming, costly, and disruptive, particularly in fast-moving industries where delays can impede market growth. To address this, the framework could mandate alternative dispute resolution (ADR) methods, such as arbitration or mediation, for SEP-related conflicts. ADR processes are typically faster and less adversarial than court proceedings, providing a practical avenue for resolving licensing disagreements without stalling technological progress. Standardizing ADR mechanisms within the SEP and FRAND context would not only reduce legal expenses for both parties but also enhance the overall predictability and efficiency of the licensing process.

Finally, the regulatory framework should incorporate mechanisms to monitor compliance with SEP and FRAND terms. An oversight body, possibly in collaboration with standards organizations, could audit licensing agreements to ensure adherence to FRAND principles. Such an entity could also review SEP holders' licensing practices and handle complaints from implementers who believe they have been offered unfair terms. By holding both SEP holders and implementers accountable, this oversight would reinforce trust in the FRAND process and deter abusive practices. Additionally, periodic reviews of FRAND guidelines would allow the framework to evolve alongside technological advances and market shifts, ensuring that it remains relevant and effective over time.

In conclusion, a standardized regulatory framework for SEPs and FRAND is fundamental to promoting innovation, protecting competition, and facilitating access to essential technologies. By addressing ambiguities in FRAND terms, enhancing transparency, promoting international harmonization, adapting to emerging technologies, standardizing dispute resolution, and ensuring ongoing compliance, this framework can create a balanced environment where both SEP holders and implementers can thrive. As industries become more interconnected and reliant on standardized technology, the importance of fair and predictable SEP licensing practices will only continue to grow. A well-defined SEP and FRAND regulatory framework not only strengthens the foundation of innovation-driven industries but also fosters global collaboration, economic growth, and technological progress for the benefit of all stakeholders.

7.2 RECOMMENDATIONS OF THE STUDY

1. Clarify and Define FRAND Terms: Clear, standardized definitions of what constitutes Fair, Reasonable, and Non-Discriminatory (FRAND) licensing terms are essential. Regulators should establish guidelines for fair royalty rates that consider the contribution of each SEP to the final product, the economic value of the patent, and industry norms. This clarity will reduce disputes and provide a reference point for negotiators, allowing both patent holders and implementers to approach licensing with a shared understanding of fair terms.

2. Enhance Transparency Through a Centralized Registry: A public registry for SEPs and FRAND commitments would improve transparency in SEP licensing. This registry could catalog past licensing terms, offer insights into prevailing market rates, and serve as a reference for future negotiations. Managed by an impartial body or industry consortium, the registry would also help prevent over-declaration, providing a more accurate overview of active SEPs and facilitating smoother licensing processes.

3. Promote International Harmonization of SEP and FRAND Standards: A global approach to SEP and FRAND regulation is necessary to address the cross-border nature of technology. Harmonizing policies through cooperation with organizations like the World Intellectual Property Organization (WIPO) and standards development organizations (SDOs) can prevent regulatory inconsistencies and reduce opportunities for regulatory arbitrage. By developing and promoting internationally accepted SEP and FRAND principles, countries can create a level playing field for all stakeholders involved in the standardization ecosystem.

4. Adapt Licensing Models for Emerging Technologies: With the advent of complex technologies like the Internet of Things (IoT) and 5G, which require multi-component interoperability, traditional licensing models may not be sufficient. Regulatory frameworks should support flexible licensing models, such as “license-to-all” agreements at the component level, to accommodate the unique nature of interconnected systems. This flexibility can facilitate broader adoption of standards in emerging tech fields while ensuring SEP holders receive fair compensation.

5. Implement Alternative Dispute Resolution (ADR) Mechanisms: To avoid costly and time-consuming litigation, the regulatory framework should mandate alternative dispute resolution (ADR) options, such as arbitration and mediation, for SEP-related conflicts. ADR can provide a faster, less adversarial route to resolve disputes, helping maintain industry relationships and minimizing delays. Standardizing ADR within SEP licensing would reduce legal expenses and create a more predictable, efficient licensing environment.

6. Establish Compliance Monitoring and Oversight Bodies: Compliance monitoring is crucial to ensure adherence to FRAND commitments. A regulatory body or oversight committee, potentially in collaboration with standards organizations, should audit licensing agreements, review practices, and address complaints from implementers who believe terms are unfair. This oversight will enhance trust in the FRAND system by holding SEP holders accountable and deterring abusive practices. Regular reviews by this body can also allow the regulatory framework to evolve and adapt to market and technological changes.

7. Encourage Industry Collaboration and Best Practices: Regular industry consultations involving SEP holders, implementers, regulators, and standards organizations can lead to a collaborative approach to standardization. Sharing best practices and case studies on successful licensing agreements can provide valuable guidance for stakeholders. By fostering dialogue and collaboration, the regulatory framework can promote consensus-building and reduce the likelihood of conflicts.

8. Implement Progressive Royalty Structures for New Entrants: To support innovation and competition, particularly among new entrants, the regulatory framework could consider a tiered royalty structure that gradually increases over time. This approach would help small firms and startups gain entry into the market without facing prohibitive licensing costs initially, fostering greater diversity and dynamism in the industry.

9. Provide Guidelines for Royalty Stacking and Aggregation: The regulatory framework should include guidelines to address issues like royalty stacking, where multiple SEP holders impose fees on a single product. This can be mitigated by establishing aggregate royalty caps based on the product's market value or by

promoting license aggregation. By reducing cumulative royalty costs, these guidelines will help avoid excessive financial burdens on implementers and promote fair access to standardized technologies.

10. Encourage Flexibility and Regular Review of FRAND Policies: Regularly updating FRAND guidelines to reflect changes in technology, market dynamics, and licensing practices is essential for an effective regulatory framework. Policies must remain flexible to adapt to new innovations, ensuring continued relevance and applicability. Annual or biennial reviews involving input from a wide range of stakeholders can keep the framework responsive and proactive in addressing emerging challenges.

7.3 FUTURE SCOPE OF THE STUDY

1. Exploring Sector-Specific Applications of SEPs and FRAND: Future research could focus on examining how SEPs and FRAND terms impact different sectors, such as telecommunications, automotive, healthcare, and consumer electronics. Each industry has unique standards, market structures, and innovation cycles, which may necessitate tailored regulatory frameworks. Sector-specific studies can guide the development of nuanced policies that accommodate diverse industry needs while maintaining fairness and innovation incentives.

2. Investigating the Impact of Emerging Technologies on SEPs and FRAND: As technologies like 5G, IoT, artificial intelligence, and block chain continue to evolve, future studies should explore how these advancements influence the SEP landscape and FRAND licensing. Understanding the complexities and interdependencies of these technologies will help shape policies that accommodate the multi-component and highly interconnected nature of modern innovations. Research in this area could provide insights into licensing models that better support interoperability while respecting patent rights.

3. Analyzing the Role of International Collaboration in SEP Regulation: Given the global nature of technology, future studies should examine the effectiveness of international regulatory cooperation in SEP management and FRAND enforcement. Investigating how different countries coordinate policies, resolve cross-border disputes, and align licensing practices could yield valuable insights for creating

harmonized international frameworks. Such research could highlight best practices for establishing consistent SEP and FRAND guidelines worldwide, minimizing jurisdictional conflicts and promoting global market stability.

4. Developing New Licensing Models and Strategies: Traditional licensing models may not suit the requirements of fast-evolving technologies and multi-layered systems. Future studies could focus on innovative licensing approaches, such as pool licensing, component-level licensing, and royalty-free models, to determine which methods best balance patent holder interests with public accessibility. Researching these models could identify ways to reduce costs for implementers while ensuring fair returns for SEP holders.

5. Assessing the Efficiency of Alternative Dispute Resolution Mechanisms: Since ADR mechanisms like mediation and arbitration are increasingly recommended for SEP disputes, future research could assess their efficiency compared to traditional litigation. Studies could evaluate factors such as time, cost, and satisfaction among disputing parties. The findings could guide improvements in ADR procedures, identify optimal practices for SEP-related conflicts, and help establish ADR as a standard approach in SEP dispute resolution.

6. Evaluating the Socio-Economic Impacts of SEP Regulation: Another promising area for future research is the broader socio-economic impact of SEP and FRAND regulations on innovation, consumer access, and market competition. Studies could assess how SEP policies affect the affordability of standardized technology, encourage or hinder market entry for smaller companies, and influence global technology transfer. Such research can provide a holistic understanding of the societal benefits and challenges of SEP regulation.

7. Exploring the Potential of Artificial Intelligence in SEP Management: Artificial intelligence could play a transformative role in managing SEPs, from identifying essential patents to monitoring FRAND compliance. Future research could explore the potential of AI-driven tools to streamline SEP analysis, automate patent classification, and ensure that FRAND terms are met in real-time. These studies could contribute to the development of digital tools that make SEP management more transparent, efficient, and equitable.

8. Examining the Impact of SEP Regulation on Innovation Incentives:

Understanding the delicate balance between protecting patent rights and encouraging innovation is essential. Future studies could investigate how different SEP and FRAND policies influence the motivation of firms to invest in research and development. By analyzing the relationship between SEP regulation and innovation, researchers can provide insights into how policies can be designed to both reward patent holders and encourage technological advancement.

9. Investigating Royalty Stacking Solutions: Royalty stacking remains a contentious issue, as multiple SEP holders may demand royalties on a single product. Future studies could analyze strategies to mitigate royalty stacking, such as establishing aggregate royalty caps or facilitating patent pools. Research in this area could offer solutions to prevent cumulative costs from becoming prohibitive, fostering a more balanced ecosystem for SEP implementation.

10. Assessing the Viability of Dynamic FRAND Terms: Static FRAND terms may not adequately reflect the fluctuating nature of technology markets. Future studies could explore dynamic FRAND frameworks that adjust licensing terms based on factors such as patent usage frequency, market size, and technological relevance. This line of research could result in flexible FRAND policies that evolve in response to market demands, fostering sustainable and adaptable SEP licensing practices.

11. Exploring the Integration of SEP Management with Broader IP Ecosystems: Future research could investigate how SEP and FRAND management fits within the broader intellectual property ecosystem. Understanding interactions between SEPs and other types of IP rights, such as trademarks and copyrights, could highlight potential areas of overlap, conflict, or synergy. This research would support a more integrated and cohesive IP landscape that benefits SEP holders, implementers, and end-users alike.

12. Evaluating the Role of Regulatory Bodies and Oversight Mechanisms: The effectiveness of SEP and FRAND regulation depends largely on the role of regulatory bodies and their enforcement mechanisms. Future studies could evaluate how oversight entities enforce FRAND terms, monitor compliance, and address abuses of market power. This research could offer guidance on improving regulatory

frameworks to prevent unfair practices while maintaining a fair and transparent SEP licensing process.

13. Assessing the Potential of Open-Source Licensing as an Alternative to Traditional SEPs: As open-source initiatives gain traction; future research could assess the viability of open-source licensing as a model for standardized technology. Studies could compare the benefits and limitations of open-source versus traditional SEP frameworks, especially regarding accessibility, innovation, and security. This research could offer an alternative approach to SEP management, fostering more open and collaborative innovation environments.

These recommendations highlight promising avenues for future research on SEPs and FRAND that can address emerging challenges, promote fairer practices, and ensure that the regulatory framework evolves alongside technological advances.

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LIST OF PUBLICATIONS

LIST OF INTERNATIONAL/NATIONAL CONFERENCE

1. M. Varalakshmi, A Study Of Intersection Of Competition Law And Intellectual Property Rights In India, National Conference on Recent Advances in Science, Engineering, Humanities, and Management (NCRASETHM - 2024), Banquet, Noida, India, 28th January, 2024
2. M. Varalakshmi, An Evolution of Patent and Competition Law in India, International Conference on researches IN Engineering, Science, Technology, Management AND Humanities (ICRESTMH – 2024), Bhubaneswar, Odisha, India, 25th August, 2024

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**A STUDY OF INTERSECTION OF COMPETITION LAW AND
INTELLECTUAL PROPERTY RIGHTS IN INDIA**

M. VARALAKSHMI

Research Scholar, Ph. D. in Law
P.K. University, Shivpuri, MP.

ABSTRACT

The intersection of competition law and intellectual property rights (IPR) in India represents a complex relationship between fostering innovation and ensuring a competitive marketplace. Intellectual properties rights, including patents, trademarks, and copyrights, provide creators with exclusive rights to protect their innovations, encouraging research and development. However, these rights can sometimes lead to monopolistic practices, potentially stifling competition. To address such challenges, the Competition Act, 2002, plays a vital role by regulating anti-competitive behavior and abuse of dominance. This intersection is particularly significant in industries like pharmaceuticals, technology, and media, where innovation is driven by strong IPR protection, but excessive control can limit access and fair competition. The Competition Commission of India (CCI) has been pivotal in addressing cases where IPR owners exploit their market power, such as through unfair licensing terms or refusal to license essential technologies. For instance, the CCI has examined cases of patent abuse and standard-essential patents (SEPs) in the technology sector to balance innovation incentives with market fairness. India's approach reflects a nuanced understanding of this interplay. While respecting the exclusivity granted by IPR, competition law ensures that such rights do not harm consumer welfare or hinder innovation by promoting access, fair practices, and a level playing field.



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Title of the Paper An Evaluation of Patent and Competition Law in India.

Gurpreet

Dr. Guru Sharan Kaur

Session Chair



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R. Lathgi

Dr. R. Lathangi

Session Chair

CERTIFICATE NO : **ICRESTMH /2024/C0824834****An Evolution of Patent and Competition Law in India****M Varalakshmi**

Research Scholar, Ph. D. in Law, P.K. University, Shivpuri, M.P., India.

ABSTRACT

The evolution of patent and competition law in India reflects the country's journey toward fostering innovation while ensuring a fair market. The Patents Act, 1970, marked a significant shift from the colonial-era law by emphasizing indigenous innovation. It limited patent protection for food, drugs, and chemicals to processes rather than products, encouraging affordable access to essential goods. This approach aligned with India's socio-economic needs but underwent a transformation with India's accession to the World Trade Organization (WTO) in 1995. The Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement necessitated compliance with global patent norms, leading to amendments in the Patents Act in 2005, reintroducing product patents in pharmaceuticals and agrochemicals. Simultaneously, India recognized the need to balance innovation with market fairness. The Monopolies and Restrictive Trade Practices Act, 1969, aimed at curbing monopolistic tendencies, was replaced by the Competition Act, 2002. This modern legislation promotes healthy competition, preventing anti-competitive practices like abuse of dominance and cartelization. Over time, the interplay between patent and competition law has gained prominence, particularly in the pharmaceutical and technology sectors, where intellectual property rights and market dynamics often intersect. The evolving legal framework underscores India's commitment to fostering innovation, ensuring access, and maintaining market equilibrium in a globalized economy.

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Convergence of Competition Law and Patent Law in the FRAND Regime

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ABSTRACT

An important field of legal and economic study is the FRAND regime's (Fair, Reasonable, and Non-Discriminatory) interaction between patent law and competition law, which aims to promote innovation while avoiding anti-competitive practices. While competition law works to protect consumers from monopolies, patent law gives inventors short-term exclusive rights to promote technical progress. With Standard Essential Patents (SEPs)—crucial for achieving technical industry standards and having far-reaching consequences in areas like ICT—this interaction becomes more complex. Patent holdups, royalty stacking, and unfair licensing tactics are just a few examples of how the tension between encouraging innovation and preserving market competition frequently appears. The FRAND regime, which aims to reconcile competing goals, becomes an essential framework for dealing with these issues. But, different legal traditions and economic factors impact how FRAND principles are interpreted and enforced across nations.

Keywords: Competition law, Patent law, Intellectual property rights, Market, Monopoly

INTRODUCTION

Since its inception in the early 20th century, judicial and administrative ideas have tended to magnify the conflict between competition policy and intellectual property rights (IPRs). The overarching goals of intellectual property laws are to ensure that creators get their fair share of profits from their inventions, to spur more innovation, and to release formerly proprietary information into the public domain. The job of competition regulators is to keep monopolies at bay and ensure that markets are competitive. Occasionally, this limitation limits the free use of the exclusive rights granted by Intellectual Property Laws. The protection of intellectual property and the regulation of market competition are closely related. The former authorizes the maker and seller to produce and sell the owner's intellectual property within a certain market, provided that the owner meets specific requirements. These inventions and pieces of art are protected by copyrights, patents, trademarks, trade secrets, and other forms of unique protection. Thus, IP rights define the area in which competitors can exercise their rights.

To maximize societal benefit, laws governing intellectual property and competition seek to prohibit monopolies while also permitting temporary monopolies. However, intellectual property laws should address the condition that monopolies be economically substantial. If not, competition law might be able to hinder monopolies by prohibiting certain monopolistic acts or attempts to gain monopolies, even if it does not outright prohibit monopolies. Any and any usage, or lack thereof, of the owner's intellectual property is entirely within their rights. No violation of competition law would occur if the owner of a patented or non-patented product chose to sell it to the consumer directly or determined the selling price through his representatives.

On a separate note, developing countries have good reason to be concerned about the potential outcome of TRIPS. One worry is that stronger protections for intellectual property would give FTCs greater market power, which may lead to fewer sales, higher prices, and less technological sharing in general. The rate of innovation and the number of new competitors might both be stifled by an increasingly dominant market. Tighter protection of intellectual property rights may make other forms of anti-competitive activity, such sales methods and licensing restrictions, easier with more market dominance. Here are a few examples of these practices: (a) potential competitors forming cartels through price fixing, output limiting, or market splitting through cross-licensing agreements; (b) certain markets having entry barriers raised through tie-in sales or restrictions on related technology due to intellectual property rights (IPR); and (c) new or small businesses facing difficulties breaking into established markets due to threats or actual bad faith litigation and opposition proceedings stemming from IPR protection.

The last point to make is that competition regulation aims to curb attempts to exploit an IP asset in a way that goes against IP rights. A conflict emerges when competition regulations prioritize static market access and intellectual property rights (IPRs) prioritize incentives for dynamic competition. However, when both frameworks are well-designed, they complement one other to create a balanced environment that is conducive to innovation, technology transfer, and information dissemination.

STANDARD ESSENTIAL PATENTS AND FRAND

Legal doctrines pertaining to the safeguarding of creative works are collectively known as IP Law. It is an exclusive right, similar to others in property law. It gives the IP owner the authority to stop others from using their IP. Copyrights (for the protection of literary and creative works), trademarks (for the protection of trademarks), designs (for the protection of designs), and patents are all examples of intellectual property rights that cover a broad spectrum of IP. Inventions in technology, whether they are improvements to current products or completely new ones, are often the subject of patents. It might potentially include a single, novel method. The owner of a patent has the only right to manufacture or use the patented product or procedure. All kinds of intellectual property, including patents, have traditionally been territorial in character. The fundamental rationale for pursuing patents is to forestall market imitations and to temporarily reap the benefits of one's labor. One subset of patents that is absolutely necessary for a certain process is known as a Standard Essential Patent (SEP). Patents of this kind are essential for meeting the technical requirements of the relevant industry, and SEPs are one type of patent that meets those requirements. SEPs safeguard innovations that have required tremendous effort to create and symbolize the fundamental innovation in an industry. Examples of devices that make use of SEPs include smartphones, tablets, linked vehicles, smart home apps, smart stores, gaming technologies, and connected healthcare. When it comes to patent battles, SEPs play a key role, particularly in the ICT sector. Such patent conflicts have engulfed the majority of IT firms, including Samsung, Apple, Motorola, Ericsson, Nokia, and Microsoft.

It is well-known that in this context, the lawsuits involving the enforcement of standard essential patents for Universal Mobile Telecommunications Service (UMTS) and General Packet Radio Service (GPRS) were handled by Motorola and Samsung, respectively. In contrast to SEPs, non-essential patents (non-SEPs) may be generated using alternative approaches by firms and do not impede a whole industry as "slide-to-unlock" patents do. As a consequence, litigation involving non-SEPs is less common. Even at the administrative level, the rising number of challenges related to SEPs and the mountain of case law during the last six years indicate that a definitive solution is nowhere in sight. The new anthem and rules in many places, including the US, EU, China, and Japan, are based on the Fair Reasonable and Non-Discriminatory (FRAND) principles, however it has been shown that FRAND does not apply universally. In different legal systems, the concepts of fairness, reasonableness, and nondiscrimination could have different meanings. In their analysis of the concept of nondiscriminatory, Dennis Carlton and Alan Shapiro have put out an economic suggestion. The idea that all "similarly situated" businesses should pay the same royalty rates is put out there in nondiscriminatory language. But nobody seems to have a firm grasp on the subject. The case of *Unwired Planet v. Huawei* shows that the courts in the UK have taken a different view. It should also be emphasized that FRAND is a contractual word. The rules of contract law would, of course, apply to any infractions. French contract law is the bedrock from which FRAND phrases emerged. Courts in several countries have started using this approach, including the United Kingdom and the United States. Although a pattern has emerged, the precise meaning of FRAND terms remains up for debate. When trying to figure out what constitutes fair and acceptable, it's clear that most countries use the similar rates method. This strategy is shown, for instance, in the cases of *Microsoft v. Motorola* and *TCL v. Ericsson*. Other nations, however, have a different opinion.

FRAND REGIME AND ITS IMPORTANCE IN LICENSING SEPS

Interoperability and standardization are of utmost importance in today's technology-driven society for the smooth integration of devices, systems, and applications from different manufacturers. From the telecommunications industry to the automobile manufacturing sector, standards such as 4G, 5G, Wi-Fi, and video codecs are fundamental to worldwide connection. These standards are based on technology that are frequently shielded by patents called Standard Essential Patents (SEPs). Careful licencing management of these SEPs is required to strike a balance between incentivizing innovation and protecting the market from misuse, as they are essential for the standards' implementation. In response to this difficulty, the FRAND regulation was put in place; it is now an essential part of the process for licensing SEPs.

Patent owners of standard-essential patents (SEPs) are required by the FRAND regime to make their technology available to manufacturers and developers on fair terms so that everyone can benefit. To that end, it mandates that license agreements be reasonable, nondiscriminatory, and equitable. While ensuring that SEP holders are paid for their contributions to innovation, these rules aim to prevent them from abusing their market position.

SEPs stand out from the crowd because they lay claim to technologies that are deemed crucial for putting a standard into action. For example, a 5G network's operation may depend on a certain encryption mechanism. Companies

providing goods and services cannot meet a standard's technical criteria unless they have access to SEPs. Because their patents are required for everyone trying to adopt the standard, SEP holders end up with a lot of sway in the market. Having this kind of authority encourages innovation, but it also comes with the potential of monopolistic practices like charging ridiculous royalties or enforcing onerous license conditions.

Standard-Setting Organizations (SSOs) mandate that SEP holders license their patents on FRAND terms to reduce the likelihood of such dangers. When it comes to coordinating the development of standards and making sure that patented technology are accessible through FRAND pledges, SSOs like the IEEE and the European Telecommunications Standards Institute (ETSI) are vital.

Promoting Technological Innovation and Standardization

By guaranteeing that SEP holders get just remuneration for their roles in standard development, the FRAND framework encourages innovation. Furthermore, it stops these rights from being used to exclude certain markets. This equilibrium is achieved by the regime by incentivizing innovators to share their innovations with SSOs, which leads to the development of strong and broadly used standards.

Ensuring Market Accessibility and Competition

In the absence of FRAND obligations, SEP holders may engage in monopolistic actions and limit market accessibility by using their patents to exclude rivals or demand exorbitant fees. Because of the FRAND regime, vital technology will always be available to all market players, which encourages innovation and growth for companies of all sizes via healthy competition. This is of utmost significance in sectors such as telecommunications, where international competition and standards are fundamental.

Preventing Hold-Up and Hold-Out

Two important concerns are handled by the FRAND regime: hold-up and hold-out.

- **Hold-up** happens when SEP holders take advantage of their position by seeking exorbitant royalties following the adoption of a standard. In order to stay competitive, implementers may be compelled to accept unjust conditions since they are unable to resist employing SEPs.
- **Hold-out** occurs when implementers choose to rely on protracted litigation to postpone payments rather than negotiate or pay royalties, even when the license conditions are appropriate.

Global Interoperability and Economic Growth

The availability of SEPs under FRAND conditions is crucial to the general adoption of standards like 5G, Wi-Fi, and Bluetooth, which have a worldwide reach. The FRAND regime promotes worldwide interoperability by guaranteeing equitable and nondiscriminatory licensing practices; this is crucial for sectors such as healthcare, manufacturing, and telecommunications. Because companies can create and release new innovation with the assurance that it will work with current systems, interoperability is a key driver of economic development.

Facilitating Legal and Regulatory Clarity

Another important function of the FRAND system is to lessen regulatory and legal ambiguity. Disputes between SEP holders and implementers can be better handled using the structure it offers for SEP licensing. With the rise of high-profile lawsuits using SEPs, such as Microsoft v. Motorola in the US and Huawei v. ZTE in the EU, this becomes even more crucial. The FRAND framework is frequently used by courts and competition authorities to determine if licensing arrangements are in compliance with antitrust laws.

THE INTERPLAY OF COMPETITION LAW AND PATENT LAW

There has always been tension between intellectual property law and competition law. As a subset of intellectual property law, patent law grants the owner of a patent temporary exclusive rights. But the goal of competition law is to level the playing field so that everyone has a fair chance to compete and succeed. But when it comes to encouraging innovation in society, the goals of patent law and competition law overlap. One may say that the purposes of patents and standards are complementary; both seek to foster innovation and facilitate the spread of new technologies. Nonetheless, their relationship is hostile as well. Patent ambushes, hold-ups, and strategic patenting involving overlapping rights are commonplace in this field. Vested interests try to shape and control market circumstances for competitors and system end users from the early stages of the innovation cycle by influencing standardization.

The density and quality of patents also show how over-declaration and poor patents affect each other. The need to reveal potentially crucial patents quickly is clearly at the root of the over declaration problem. As a result, patents for even "weak" innovations—those that are marginally better than prior ones—tend to pop up. The result is that some academics have claimed a crisis in patent law and others have cast doubt on the contribution of patent protection to innovation. The European Commission has also cast doubt on patent law and examined it closely, suggesting that it is riddled with issues. Competition issues arising from patents have been often before the Commission in recent years, most often in the context of the pharmaceutical and telecommunications sectors.

"In short, our patent system, while surely a spur to innovation overall, is in danger of imposing an unnecessary drag on innovation by enabling multiple rights owners to "tax" new products, processes and even business methods," Carl Shapiro warned in 2001, sounding the alarm about the dangers of employing patents to promote innovation. Although the original intent of patent law was to incentivize innovators, he and a handful of other prominent figures argue that patent law actually discourages innovation.

From a competition law standpoint, SEP misuse can negatively affect international trade in addition to causing patent hold-up, royalty stacking, refusal to license, and contributing to end-user cost inflation. In a typical hold up, the SEP holder—who is in a stronger position—states the license terms, and the implementer—who is in a subordinate position—is required to comply with those terms. As stated in Article 102 of the Treaty on the Functioning of the European Union (hereafter referred to as "the TFEU"), patent ambush is an example of a type of a hold up that can take many forms, such as impeding investments, innovation, or the misuse of a dominating position. In most cases, patent ambush occurs when the owner of the patent keeps quiet about the fact that it might become a standard in the industry. The fact that the patent holder can charge exorbitant royalties is abusive conduct. This discriminatory practice was acknowledged by the Commission in the Rambus ruling.

Additionally, in a hold out or reverse hold up, the SEP holder is in a precarious situation. A holder of a SEP may suffer substantial losses as a result of the implementers' reluctance to settle on a single course of action. If this were to happen, the SEP holder would likely offer the SEP at a substantially reduced rate to avoid losing money. The problem of patent thickets, as Carl Shapiro so eloquently put it, "...an overlapping set of patent rights requiring that those seeking to commercialize new technology obtain licenses from multiple patentees," is another important consideration. When you add in the possibility of delay—specifically, the possibility that newly developed items may unintentionally violate patents granted after their creation—the patent maze becomes much more difficult to navigate. Data collected over the last decade shows that patent thickets reduce competition and drive up costs.

Ericsson and Micromax's legal battle brought to light the expanding intersection between IP rights law and competition law. There is a potential of abuse of dominance due to the inherent importance of SEPs in technology deployment. Both the 2002 Competition Act and the European Union Treaty, under Article 82, prohibit abusive and anti-competitive conduct. In both instances, the CCI noted that of Ericsson's 33,000 patents, 400 were awarded in India, making it a dominating participant. Discriminatory (due to patent hold-up and royalty stacking) since Ericsson's royalty rates were directly proportional to product costs and had no connection to the patented product. A non-disclosure agreement was required of all users involved in the Intex issue. As a result of this arrangement, consumers couldn't access data about other users' royalty rates. This lowered transparency and hampered the FRAND spirit. Because both companies do business in India, the courts there would have jurisdiction over any disputes arising from the Intex-Ericsson Agreement, but the parties instead agreed to let the courts in Singapore and Sweden handle such matters.

THE POLITICS OF JURISDICTIONS

A one-judge panel of the Delhi High Court heard Ericsson's challenge to the CCI's authority, voiced its disapproval of the CCI's involvement, and ordered the CCI Director General to stop conducting any further investigations. Despite Ericsson's assertions that the matter was only related to the contract, the CCI applied FRAND royalty rates in both instances, citing Clause 6 of the ETSI IPR policy. Notable companies' involvement in patent lawsuits has reignited the issue about the Competition Commission's authority. Those with intellectual property rights are granted monopoly over the exercise of that right by Section 3(5) of the Competition Act, which exempts them from the Act's requirements. Nevertheless, as stated in Section 62 of the aforementioned Act, the provisions of the Act are meant to supplement, rather than supersede, any other laws.

The purpose of the Commission is to safeguard consumers against abuses of dominating positions and anti-competitive practices, as stated in the Preamble. As a result, the Commission used welfare law as a justification for its authority. Standard establishing organizations were established with the goal of improving and fostering competitiveness via the development of standards, as mentioned before. Technology should continue to reach out to people, even while everyone competes. In order to compensate for not having patents that can be negotiated, non-patent owners will have to pay somewhat higher licensing costs, but they will also have a chance to benefit from the invention and sell it to customers. That way, everyone from technical contributors to non-contributors may participate in the patenting process while still making, selling, and importing items that meet the criteria.

The CCI, nevertheless, overlooked this. The CCI relied on circumstantial evidence in both instances, disregarding the intricacies of the FRAND system, to reach its determination. Since SEP-holders rely on the parties' contractual bargaining rights, it is impossible to weaken the courts' jurisdiction. The SEP-holders are disincentivized and innovation is indirectly discouraged when the contractual character of SEP agreements is disregarded. Evidence of the patent's essentiality is propelled by the prospect of an injunction. It is unacceptable for an uninterested licensee to use arguments about public benefit or competition to coerce the SEP holder into paying a royalty rate—that would

constitute a compelled license. Ultimately, the dispute around the CCI's authority will be resolved by the passage of time.

CONCLUSION

Recognizing the need of both encouraging innovation and preserving fair market competition, the FRAND regime brings together patent law and competition law. Although intellectual property rights provide innovators with short-term monopolies to incentivize investment and ingenuity, competition law prevents the unfair stifling of market access or inflation of costs via the exploitation of these rights. When it comes to Standard Essential Patents (SEPs), the dynamics are even more knotty since patent holders and implementers frequently but violently disagree on license conditions, patent delays, and royalty issues. Problems arise from different interpretations in different countries, even while legal frameworks like FRAND try to bring these interests into harmony by requiring rationality, non-discrimination, and fairness. Implementers (hold-outs) strategically underutilize SEPs, which reduces the value of patent protections, while patent ambushes and royalty stacking are examples of SEP misuse that might reduce market competition and increase consumer costs. Maintaining innovation and promoting fair market dynamics through the integration of patent and competition law is crucial for creating a well-balanced ecosystem that is beneficial to all parties involved.

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IMPACT OF INTELLECTUAL PROPERTY RIGHTS POLICIES ON DEVELOPING SEPS STANDARDS STANDARD ESSENTIAL PATENTS

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ABSTRACT

Intellectual Property Rights (IPR) policies play a pivotal role in shaping the landscape of Standard Essential Patents (SEPs), which are critical for ensuring interoperability and uniformity in industries such as telecommunications, electronics, and software. SEPs are patents essential to comply with specific technical standards, and their management through IPR policies is crucial to maintain a balance between promoting innovation and protecting the interests of both patent holders and implementers. These policies seek to prevent issues such as patent hold-up, royalty stacking, and litigation, which could hinder the widespread adoption of critical technologies. The impact of IPR policies on SEPs extends beyond patent protection and licensing, as they also influence innovation, competition, and market dynamics. While IPR policies incentivize innovation by granting exclusive rights to inventors, excessive patent protection can lead to problems such as patent thickets, where overlapping patents stifle competition and increase costs. Furthermore, SEP holders may abuse their position, engaging in anti-competitive behavior or using their patents as leverage to extract high royalties.

Keywords: Standard Essential Patents, Licensing, Royalty, Innovation, Technology

I. INTRODUCTION

Trade, innovation, and economic progress on a worldwide scale are now heavily reliant on intellectual property rights (IPRs). In doing so, they secure exclusive rights to creators' innovations, creations, and ideas, which in turn encourages innovation. Standard Essential Patents (SEPs) are a subset of intellectual property rights (IPRs) that is extremely important, especially in the fields of technology and innovation. The worldwide market for advances in areas like software, electronics, and telecommunications is significantly shaped by SEPs, which are patents that are important to a particular technical standard. Problems have arisen, particularly in poor nations, as a result of the growing dependence on SEPs to construct vital industrial standards. The capacity of emerging economies to engage in and reap the benefits of global technological progress is significantly affected by laws pertaining to the preservation and enforcement of intellectual property rights (IPRs), including in particular SEPs.

The development of standards is an essential component of innovation ecosystems. This is especially true in fields like the digital economy, 5G telecommunications, the Internet of Things (IoT), and telephones, where complex networks and systems rely on interoperability. Various entities owning patents that are

essential to the standard's implementation often contribute to its evolution. Management, licencing, and enforcement of SEPs may have a substantial impact on market dynamics, making them essential assets for enterprises. There are several ethical, legal, and financial issues that arise from the connection between intellectual property rights regulations and the creation of SEPs. This is especially true for developing nations that may have a hard time affording or enforcing SEPs because to the high expenses involved and the risk of patent abuse.

The influence of intellectual property rights legislation on the growth of SEPs in emerging markets is complex. First, these rules can guarantee that inventors get their money's worth by encouraging innovation and safeguarding the rights of patent holders. However, some worry that emerging nations may be unable to get access to markets due to stringent enforcement of intellectual property rights, which might eventually lead to monopolistic tactics, less competition, and increased prices for consumers. Industries like telecoms that rely largely on SEPs have an especially hard time balancing innovation and access since the expense of licencing SEPs can make up a significant chunk of the overall cost of adopting a new technology or standard.

The absence of consistent worldwide intellectual property rights legislation compounds the problem of SEPs in emerging economies, whereby nations at various points in their development encounter unique difficulties and possibilities related to SEPs. In contrast to the strong intellectual property rights (IPR) protection and enforcement systems in rich countries, many developing nations have challenges with their patent systems, enforcement capabilities, and institutional understanding of SEPs. The disparity in the enforcement of intellectual property rights creates an unfair playing field. Multinational corporations with special economic privileges (SEPs) in developed countries may reap disproportionate benefits, while local innovators in developing countries face significant obstacles in protecting their IP and participating in global standard-setting initiatives.

As a solution to the difficulties developing nations encounter in gaining access to and licensing SEPs, patent pools have emerged as a prominent tool. These pools enable organizations to combine their SEPs and sell them as a single package. Patent pools can help smaller businesses gain access to SEPs more easily, streamline licensing discussions, and lower transaction costs. Nevertheless, there is ongoing dispute over their efficacy in encouraging innovation in developing nations. Some believe that they unintentionally benefit dominant businesses at the expense of smaller entrepreneurs.

Concerns regarding the growth of emerging markets' economies are entangled with the policy discussion around SEPs and the preservation of intellectual property rights. The high licensing fees connected with these patents might impede poor countries' capacity to acquire and adopt new technologies. acquire to cutting-edge technologies like 5G networks, AI, and other high-tech sectors frequently involves the usage of SEPs. Therefore, in order to encourage innovation and economic development in underdeveloped nations, it is critical to establish intellectual property rights rules that find a middle ground between safeguarding patent holders and guaranteeing access to necessary technology.

Whether SEP licensing is fair, transparent, and reasonable is a major component of the current policy discussion, especially within the scope of the Fair, Reasonable, and Non-Discriminatory (FRAND) licensing system. Several international standard-setting organizations (SSOs) have accepted the FRAND

criteria to prevent unfair licensing practices and guarantee that SEP holders do not participate in discriminatory actions. Nevertheless, implementing FRAND provisions might be difficult in reality, particularly in states with underdeveloped procedures for protecting intellectual property rights. Licensing fees and terms can cause friction and disagreements in developing nations because of potential differences in understanding between developed and developing nations.

Furthermore, it is impossible to overstate the importance of international organizations like WIPO, the ITU, and the WTO in determining global IPR policies; these groups are crucial in bringing IPR laws into harmony and encouraging international collaboration on matters pertaining to SEPs. But poor nations' voices are never heard in these debates, and their sway over international IP rules is still small. Global SEP standards and licensing norms frequently bind emerging nations, even if these factors might not correspond to their unique economic and technical requirements.

II. INTELLECTUAL PROPERTY POLICIES

SDO Policies

Intellectual property policies of SDOs have been the subject of study cataloguing important elements and aspects (such as disclosure requirements, FRAND vs. RF licensing requirements, etc.) since 2002, when Lemley released the first informal census of these policies. Hence, the SEP policy landscape at the majority of major SDOs is well-documented. A number of well-known SDOs have also been the subject of extensive case studies.

However, academics have only truly examined a small number of SDO policy phrases, and those that have been litigated over tend to be the ones that have received the most attention. So, although there has been a lot of written about certain SDO policy provisions, such as the need for "balance" in SDO decision making,⁵¹ the disclosure of SEPs, the definition of "essentiality," the prohibition of discrimination among SEP licensees, the limitation of a SEP holder's ability to seek injunctive relief against a prospective licensee, and the assurance that the acquirers of FRANDencumbered SEPs receive FRAND commitments, there has been surprisingly little scholarly attention to other important policy provisions, either regarding their historical development, interpretation, or implementation in the field. Among them are the rules that allow for the defensive suspension or termination of licenses, the rules that demand grantback or reciprocity, and the way in which participants are tied to the policies of an SDO.

Consortia and their Policies

Private, limited-scope consortia now do a lot of standards-development work in addition to regular SDOs. Publicly available information on standards-developing consortia and the standards that fall within their purview is scarce, with the exception of a single law firm website. Fewer studies have examined consortia policies than typical SDO policies due to the lack of transparency in these organizations' public engagement practices. Furthermore, there is a lack of information about the way consortia engage with bigger SDOs. This includes how often consortia submit their privately created standards to official SDOs for acceptance and publishing, as well as how these submissions affect the SEP promises done to the consortium. For many reasons, consortia are a promising new way to conduct research and gather data.

SDO Policy Amendments and Organizational Dynamics

Both inside and outside of SDOs, there has been heated discussion about recent policy shifts. Consequently, a lot of research has looked at how changes in SDO policy affect things like SEP declarations, standardization activities, and SDO membership. Also thoroughly documented are the processes for making policy revisions inside SDOs. Recent years have seen a great deal of interest in the 2015 SEP policy changes proposed by the IEEE. The effects of these changes on IEEE standardization efforts have been the subject of seemingly conflicting analysis. Additional research into these consequences is necessary in light of the contradictory findings from these studies and the new regulation changes proposed by IEEE in 2022.

The internal SDO governance procedures have also been brought to light by the dispute over the 2015 policy modifications made by IEEE. Sidak found that the procedure was prejudiced against patent holders after examining the make-up of key IEEE committees and how they handled member comments made during the amendment process. Analysis of SDO policy making, bias, and capture was brought to light in this paper through the use of empirical research tools. These methods have the ability to shed light on SDO policymaking by studying various organizational behaviors and trends.

III. IPR POLICIES AND THEIR ROLE IN SEPS

A technical standard's requisite patents, known as Standard Essential Patents (SEPs), are heavily influenced by intellectual property rights (IPR) legislation. Standards development organizations (SDOs) normally establish standards to guarantee interoperability and uniformity across sectors; SEPs occur when a corporation creates technology that is considered crucial for a certain standard. Telecommunications (4G, 5G, Wi-Fi standards) and electronics (USB, HDMI standards) are two examples of standards where SEPs are prevalent. There has to be a delicate balancing act between the needs of patent holders—who want to be able to keep their innovations safe—and those of patent users—who want to be able to use these technologies to make interoperable products and remain competitive—in intellectual property rights policies.

Having access to patents is crucial for enterprises to have the technology needed to execute and comply with global standards, which is why intellectual property rights laws in SEPs are so important. A lack of transparent and equitable intellectual property rights regulations puts businesses at risk of patent hold-up, royalty stacking, and litigation, which in turn reduces innovation and drives up prices for everyone involved. The promotion of FRAND licensing practices is an important part of intellectual property rights policies. These practices try to prevent SEP holders from being anti-competitive by charging too much in royalties or imposing too many unreasonable terms on those who want to use the standard.

The primary role of intellectual property rights laws within the framework of SEPs is to provide transparent and equitable standards for patent licensing. Any business that wants to make items that meet a standard will almost certainly infringe on patents that are fundamental to that standard's implementation. A market failure, in which expensive prices prevent broad use of essential technology, may occur if SEP holders were able to use their patents to take exorbitant royalties, which would be impossible to do in the absence of consistent and fair regulations.

IV. IMPACT OF IPR POLICIES ON SEPS

To foster innovation and safeguard the interests of patent holders in all sectors, rules pertaining to intellectual property rights (IPR) are essential. Patents that are essential to the implementation of a particular technical standard are known as Standard Essential Patents (SEPs), and these patents add complexity to intellectual property rights legislation. Worldwide adoption of standards such as 4G, 5G, Wi-Fi, and Bluetooth makes SEPs very important in the tech industry, particularly in the electronics, software, and telecommunications subsectors. Not only do patent holders benefit from well-managed SEPs inside IPR frameworks, but so do implementers, customers, and the market as a whole.

IPR Protection and Innovation

Basic to intellectual property rights (IPR) laws is the idea that they might encourage more R&D by giving innovators and inventors exclusive rights to their work. These regulations play an especially important role in SEPs since they safeguard the proprietary information of technologies vital to the establishment of industry standards. Companies would be hesitant to invest in creating technologies that are important for devices and networks to be able to communicate with each other without this kind of security. Firms can negotiate royalty rates with implementers, the firms whose products include these technologies, when they hold SEPs. These SEPs are essential when companies create new technologies that are critical to standards. By preventing infringement on their intellectual property, SEP holders are able to get just recompense for their ideas thanks to IPR rules. Consequently, there is still a strong push to innovate and develop better technology.

On the other hand, when intellectual property rights protection is overly strict, significant problems emerge. The formation of "patent thickets," or a complex network of overlapping patents, is one such problem that might hinder the entry of smaller companies into the market. When special enterprise patent (SEP) holders employ patents that are too general or nebulous, they create a patent thicket that makes it hard for new companies to develop without worrying about infringing on existing patents. An item like a smartphone, for example, may violate a plethora of patents. Suppressing competition and innovation, patent holders can make smaller enterprises' goods that implement industry standards prohibitively costly through aggressive patent enforcement. In addition, when intellectual property rights are too protected, it's possible for patent holders to abuse their position of power by keeping technology under lock and key and participating in anti-competitive practices or collecting exorbitant fees. Industries like telecoms face this challenge head-on because of the quick pace of standardization and the critical nature of the technology that businesses rely on to remain competitive. The IPR framework can stifle innovation instead than spur it if it permits abusive or too broad patent claims.

Fair, Reasonable, and Non-Discriminatory (FRAND) Licensing

The necessity for FRAND licensing is emphasized by intellectual property policies within the framework of SEPs in order to solve these problems. The FRAND framework aims to strike a balance between patent holders and implementers, ensuring that SEP holders are properly rewarded for their discoveries and prevents them from abusing their market position through exorbitant royalty rates or unfair licensing practices. Licenses to implementers must be offered by patent holders on reasonable terms and without discrimination between various enterprises, according to FRAND. In any case, the exact meaning of "fair" and "reasonable" words is up for discussion, and disputes over these phrases frequently result in drawn-out

court fights. The two parties may have different ideas on what constitutes an appropriate royalty fee. Litigation and disagreements might arise when parties interpret the principles differently since there is no widely acknowledged formula for FRAND terms.

The situation is further exacerbated since FRAND principles are not consistently enforced across jurisdictions. As an example, when it comes to SEP licensing, the US and the EU have taken various tacks. The European Union has become increasingly assertive in its use of antitrust rules to curb unfair licensing practices, such as high fees or the refusal to license SEPs to rivals, perpetrated by SEP holders. This has resulted in a number of high-profile court cases, including the continuing battle among tech giants Qualcomm, Apple, and Google, in which the European Union has stepped in to guarantee adherence to FRAND standards. In contrast, American policy about patent enforcement has typically taken precedence above worries about the abuse of SEP licensing, suggesting a more relaxed approach to preserving patent holders' rights. Companies operating across countries face hurdles due to the disparity in regulatory approaches across key global marketplaces. As an example, navigating the global SEP environment can be challenging for a corporation that possesses and licenses SEPs in both the US and the EU, as there may be contradictory legal requirements. Uncertainty about the law, caused by FRAND enforcement discrepancies, can deter investment and drive up patent litigation expenses.

Challenges for Implementers and Consumers

The process of negotiating licensing conditions might be burdensome for SEP implementers, especially SMEs. It is possible that SMEs will be disadvantaged if large patent holders with several SEPs use their market position to negotiate higher payments. Conflicts about the reasonableness of royalty rates might arise because to the opaque nature of SEP license conditions, exacerbating the existing imbalance. In addition, because to the intricate structure of SEPs, implementers may have to get licenses from several patent holders in order to cover all the necessary patents for standard compliance. It might be too expensive for smaller businesses to negotiate SEP licensing. Each negotiating procedure can be time-consuming and costly due to the absence of consistency in license conditions. Litigation and the related legal expenses can place even greater pressure on a small or medium-sized enterprise's budget when a disagreement arises. Litigation isn't always necessary to deter smaller businesses from joining the market or creating new technology; sometimes, it's enough to dampen competition and innovation.

The burden of these issues is eventually felt by consumers. Inflated royalties cause exorbitant licensing costs, which are then passed on to consumers through the supply chain as higher pricing. The total cost of a product can be driven up by licensing costs in industries like electronics and cellphones, where several SEPs are utilized. Therefore, people may have less access to affordable, cutting-edge advancements and pay more for items that use important technologies. There may be less variety for shoppers to choose from, which adds to their worries about prices. The high costs of SEP licensing are causing some smaller enterprises to leave the market, leaving only a few of big players who can pay them. Because the dominant enterprises may feel less need to develop in the face of decreased competition, product diversity may decline and innovation may slow down.

Global Disparities in IPR Regulations

The variation in intellectual property rights rules among countries is a major obstacle to the effective management of SEPs on a worldwide scale. Disparities in the regulation of SEP licensing across nations can provide challenges for multinational corporations, as SEPs frequently incorporate technology that are used on a global scale. Take the United States as an example. They've been more lenient, typically letting SEP holders negotiate licensing terms with greater flexibility, compared to the European Union's proactive approach to SEP licensing regulation that applies antitrust principles to prohibit abusive behavior. Companies operating across various jurisdictions face legal ambiguity due to divergent regulatory approaches. Legal requirements might vary greatly from country to country, making it difficult for a corporation with SEPs to license them internationally. A corporation may discover that it is challenging to secure a reasonable license in certain regions because of the market dominance of patent holders or that it encounters legislative obstacles in other regions that make it hard to defend its patent rights.

Inconsistency in applying FRAND principles might also result from these worldwide discrepancies. Patent holders may be permitted to negotiate higher royalties or engage in discriminatory activities in some jurisdictions, whereas FRAND licensing may be more tightly enforced in others. The SEP licensing procedure is already complicated, and this discrepancy just makes things worse by raising the possibility of conflicts and lawsuits. It is possible for multinational corporations to become entangled in a "race to the bottom," when they are compelled to endure unsavory conditions in specific countries in order to obtain vital technology.

V. CONCLUSION

The licensing of Standard Essential Patents (SEPs) and the intricacies that surround them, especially when it comes to FRAND (Fair, Reasonable, and Non-Discriminatory) conditions, have a significant impact on the development of current technology, particularly in areas such as 5G/4G standards and telecommunications. It is still very difficult to strike a balance between fostering innovation and making sure people have access to necessary technology. While SEPs do encourage innovation in technology, problems like patent thickets, patent hold-up, and royalty stacking can reduce competition in the market and make consumers worry. Global SEP licensing methods are already complicated enough without having to contend with different legislative regimes in different countries or with the ever-changing nature of IP rights. Legislators and business leaders must work together to address the issue of SEP licensing in a way that is fair, open, and consistent throughout the world since technology standards are always changing.

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Dominance and Abusive Licensing Practices in Standard Essential Patents in India

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ABSTRACT

The argument about the competitive effects of Standard Essential Patents (SEPs) has heated up in recent years, especially in countries like India where the IT and telecom industries are growing at a rapid pace and patent holders have a lot of sway over the market. This research delves into the SEP ecosystem in India, specifically looking at the dominance and abusive licensing practices. It focuses on how intellectual property rights and competition legislation interact to form equitable access to critical technologies. This research examines how dominant SEP holders can undermine fair, reasonable, and non-discriminatory (FRAND) commitments through tactics such as hold-up, discriminatory licensing, excessive royalty demands, refusal to license, and coercive injunction threats. It draws on landmark cases, regulatory reports, international best practices, and academic literature to support its claims. This article takes a look at the Competition Act, 2002, the CCI's function, and new judicial tendencies that affect the enforcement of SEPs. Market competition, innovation, and accessibility are all jeopardized by the findings, which show that there are ongoing uncertainties about the meaning of FRAND, inconsistent enforcement, and insufficient protections against strategic behavior by SEP holders.

Keywords: *Patent, Market, Dominance, Abusive, Royalty.*

I. INTRODUCTION

In today's technological environment, Standard Essential Patents (SEPs) play a very important role, especially in fields like electronics, information and communication technology, and telecommunications. With India's fast transition to a digital and innovation-driven economy, SEPs play a pivotal role in determining innovation incentives, technology access, and competitive market structures. Standard Essential Product (SEP) patents assert inventions that are crucial to the implementation of a technical standard; as a result, any producer that wants to meet the standard's requirements must apply the patented technology. Those who hold SEPs have tremendous influence in the market since everyone must follow them for interoperability, efficiency, and worldwide compatibility. Holders of SEPs frequently find themselves in a position of dominance because to

their unique status, which bestows upon them both strategic benefits and regulatory obligations. When this supremacy is used unfairly or abusively through licensing methods, it distorts market competition, limits access to important technology, and hinders India's economic and technical advancement.

The idea of essentiality is the bedrock upon which dominance in the SEP setting rests. It is not possible for implementers to design around a patent that is considered vital to a standard without jeopardizing the standard's conformance. As a result, SEP holders are anticipated to provide licenses for their patents under FRAND conditions. While promoting technical dissemination and ongoing innovation, these principles aim to curb the abuse of monopoly power. Judgment in landmark instances like *Ericsson v. Micromax* and *Ericsson v. Intex*, as well as the principles of competition law outlined in the Competition Act, 2002, provide the bulk of the legal framework for FRAND duties in India. However, the ever-changing conflict between SEP owners and those responsible for implementing technology continues even with various legal frameworks in place. A number of issues arise, including the definition of non-discrimination, the limits of acceptable negotiations, and what is meant by "fair" or "reasonable" royalty rates. The risks surrounding SEP licensing methods have grown increasingly complicated as India emerges as a major electronics manufacturing base and the world's second-largest telecoms market.

There are several ways in which SEP holders engage in abusive licensing activities. A major issue is "patent holdup," in which the owner of the SEP uses its monopoly power to force the implementer to pay exorbitant royalties or comply with onerous licensing requirements after they have committed to utilizing the standard. The majority of Indian manufacturers work in margin-constrained, price-sensitive sectors, making this delay all the more troublesome. The problem of discriminatory licensing also exists, as SEP holders may provide preferential conditions to some implementers over others. Additional difficulties emerge when royalty calculations are not clear, when non-essential patents are included in licensing bundles, when rivals are refused licensing, or when injunctive action is sought too soon, frequently before good-faith negotiations have ended. In contrast to India's goals of equitable technology progress, these activities have the potential to inhibit competition, raise consumer costs, and impede the adoption of new technologies.

To combat the monopoly and possible abuse by SEP owners, the Indian competition law framework is crucial. While being in a dominating position is not in and of itself illegal under the Competition Act, Section 4 makes it clear that abusing such position is. Given the unique position that SEP holders enjoy as a result of the vital nature of their patents, the Competition Commission of India (CCI) has taken the initiative to evaluate complaints pertaining to SEPs. The CCI has hinted in its preliminary rulings that discriminatory conditions, unjust pricing, and the refusal to license SEPs on FRAND terms might constitute an abuse of dominance. Nevertheless, there are continuing discussions over the scope of the CCI's authority, especially in cases where patent rights and competition law overlap. SEP holders argue that excessive regulatory interference may diminish incentives to innovate, creating a delicate balance for policymakers—too little regulation may enable monopolistic exploitation, whereas excessive oversight may deter patenting and standard development.

The complex relationship between patent law, international standards on SEPs, and competition law further complicates the legal environment in India. While the Patents Act, 1970 protects the rights of patent holders to exclude unauthorized use, competition law seeks to prevent abuse of such exclusionary rights when they threaten market fairness and consumer welfare. Indian policymakers also take into account international agreements like the TRIPS Agreement and the recommendations of organizations like the IEEE and ETSI when formulating domestic policies. When deciding licensing issues and outlining FRAND responsibilities, Indian courts have been looking to international case law, particularly that of the US, China, and the EU, for guidance. Despite these efforts, the absence of codified statutory guidelines on SEP licensing means that much depends on judicial interpretation, case-specific analysis, and evolving regulatory perspectives.

The rapid growth of India's smartphone market, emergence of 5G technologies, emphasis on indigenous manufacturing through initiatives like "Make in India," and ambitions to become a global electronics export hub have brought SEP licensing disputes into the forefront of national discourse. For India to leverage its technological potential, it must ensure that SEP licensing fosters—not hinders—innovation, manufacturing competitiveness, and fair market access. Abusive licensing practices risk not only financial burdens on domestic manufacturers but also delay in the rollout of cutting-edge technologies, reduced consumer choice, and dependence on foreign patent-intensive entities. Conversely, an efficient SEP ecosystem based on fair licensing can accelerate the diffusion of advanced technologies, enhance local innovation capacity, and strengthen India's position in global value chains.

II. DOMINANCE AND STANDARD ESSENTIAL PATENTS IN INDIA

The Indian telecommunications industry and SEPs are the subject of around six cases. While the discussion around SEPs is in its early stages in India, it has already brought up important questions of jurisprudence about the intersection of patent law and competition policy. The Commission heard allegations of dominance abuse in every matter that came before it, in accordance with Section 4 of the Competition Act, 2002. Claiming to have misused their dominating position, the Indian mobile makers accused the SEP holders of being the market leaders in the relevant domain. In deciding whether the Competition Commission of India (CCI) has the authority to look into a case involving Ericsson and standard essential patents, the Delhi High Court made note of the fact that the Patents Act, 1970, although being a separate statute pertaining to patents, would only supersede the Competition Act in the event of a contradiction. This means that the two pieces of law might coexist peacefully so long as the solutions they provided were not incompatible with one another. Different regulators' exercise of authority is contemplated under both statutes.

Micromax accused Ericsson of abusing its dominance in a Section 19(1) (a) complaint. The complainant said that Ericsson's royalty demands were unreasonable, unjust, discriminatory, and extravagant. Since Ericsson had no connection to the patented device and declined to divulge the licensing terms agreed with the other licensees, Micromax further claimed that the company was charging high royalty rates that violated the FRAND provisions. That there was inconsistency in the royalty rates charged was supported by the non-disclosure agreements that Ericsson had the licensees

sign. Micromax argued that Ericsson should base their royalty fee calculations on the chipset or technology rather than the end value of a phone that employs such technology, arguing that Ericsson's technique was incorrect.

Since Ericsson possessed around 33,000 patents in GSM and Code Division Multiple Access (CDMA), the Commission found that it had a dominating position in the GSM industry. When it came to 2G, 3G, and Edge technologies, it held the most SEP. It was concluded that such a technology enjoys domination as there is no alternative. "Based on the information and documents filed by the Informant, it is evident that Ericsson is dominant in the relevant market of GSM and CDMA..." was the conclusion of the Commission as stated in the Order. Firms' adherence to a standard, according to the Commission, shows a lack of competing technologies and a commanding position in the market. According to CCI's definition of the market, the firm seemed to be dominant in this instance and similar ones, prompting the Director General to launch additional investigations into the allegations of anticompetitive activity and market domination. Micromax had previously agreed to pay royalties to Ericsson for the sale of every phone in India or overseas that employs 2G or 3G technology, but later in 2018, both parties dropped all unresolved challenges from the Delhi High Court and Micromax inked a worldwide patent licence with Ericsson. Micromax has asked the Competition Commission of India to drop all of its ongoing cases against Ericsson.

"The concept of relevant market implies that there could be an effective competition between the products which form part of it and this presupposes that there is a sufficient degree of interchangeability between all the products forming part of the same market insofar as specific use of such product is concerned. The CCI must look at evidence that is available and relevant to the case at hand while determining the relevant market." The Supreme Court recently rejected an order by the Competition Appellate Tribunal criticizing the "myopic" definition of relevant market.

Nevertheless, markets are defined in SEP-related FRAND disputes using patented technology, which assumes dominance prior to evaluating market definition. It is important to be vigilant about the dangers of overly narrowly defining the market by ignoring asymmetric replacements, especially in light of the emergence of fresh business models and the fast expansion of technology-driven marketplaces.

III. TYPES OF ABUSIVE PRACTICES BY SEP HOLDERS

Excessive Pricing and Its Impact on Market Competition

When SEP holders charge exorbitant prices, it's considered abusive. Exorbitant licensing prices imposed by patent holders on enterprises seeking access to vital technologies is what causes this. Competitors with fewer resources or new entrants may not be able to afford the costs imposed by such pricing tactics. The effect on competition in the market is substantial; when prices are too high, consumers end up paying more because businesses pass the cost on to them, and innovation suffers because essential technology needed to create new goods and services are harder to get their hands on. The goal of SEPs is to promote technical progress and interoperability; this approach runs counter to that goal.

Discriminatory Licensing Practices Affecting Competitors

Discriminatory licensing methods are another type of misuse. These situations arise when individuals holding SEPs provide diverse license conditions to various firms without providing valid, objective reasons for their decisions. One example of a practice that distorts competition is offering preferential treatment to particular enterprises by collecting higher fees or putting harsher criteria on some licensees while providing more favorable terms to others. Since of this, smaller businesses or new entrants are discouraged from competing since they may not be able to obtain equitable access to necessary technology.

Refusal to License and Its Consequences for Market Entry

Among SEP holders, refusal to license is a major kind of abusive behavior. This happens when the owners of patents refuse to let anybody use their ideas, even when such ideas are crucial for meeting industry requirements. New rivals that depend on access to these technologies may find it very difficult to enter the market as a result of such refusals. The ramifications are enormous; they may cause a decline in industry innovation, less customer choice, and diminished competitiveness. Dominant businesses' refusal to license their SEPs gives them complete control over the market, stifling competition and hindering the development of alternative alternatives.

Looking at the economic ramifications and legal definitions of dominance abuse within the framework of SEPs is necessary for a complete understanding of the topic. The numerous abusive activities in India's telecom industry pose a danger to customer welfare and innovation as well as to market competition. In order to create a competitive environment that is good for everyone, it is crucial to address these challenges through strong regulatory supervision.

IV. ABUSE OF DOMINANCE BY SEP HOLDERS

Patent owners frequently engage in various practices that undermine competition, such as refusing to license, charging exorbitant prices, issuing unfair or discriminatory licenses, and using SEPs in an anti-competitive manner. They also delay the entry of new competitors by abusing the patent/regulatory process, such as through supplementary protection certificates (SPCs), excessive pricing, and anti-competitive agreements, such as patent settlement agreements.

The holders of SEPs have a lot of influence in the market, which they may utilize for bad things like imposing rules that make rivals disappear or extract extortionate royalties or cross-license costs that the licensee doesn't want to pay. The SEP holders can take advantage of their monopoly status in the market in the following ways:

Patent Hold Up

A patent is considered "locked-in" after it becomes a commercially viable standard. In order to avoid having their product deemed incompatible with other firms' products and hence unsalable, manufacturers are obligated to utilize the same. Since the licensee lacks alternatives to the same technology, this criterion strengthens the negotiating position of the SEP holder. A patent holdup happens when the holder of a SEP tries to charge too much for a license, taking advantage of a

locked-in patent. The proprietor of a SEP may take advantage of the locked condition to get significantly higher royalties than before the patent was standardised, provided that the SSO does not mandate compliance with FRAND licensing. But because FRAND isn't exact, this kind of thing can happen even after SEPs are bound to it. In its analysis of the Micromax and Intex cases, the Competition Commission of India (CCI) noted that "hold-up can subvert the competitive process of choosing among technologies and undermine the integrity of standard-setting activities." In the end, the burden of paying for these patents falls on the consumers.

To further protect the confidentiality of the information on the royalties collected from previous licensing, the licensor may bind the licensee to a non-disclosure agreement (NDA) regarding the terms of the license. This causes major problems with the parties' ability to negotiate licensing terms and raises serious worries about the state of competition in FRAND proceedings.

Royalty Stacking

As a result of the imposition of additional royalties, the total licensing charge becomes larger. This happens when different SEP holders charge the same amount for different parts of the same multi-part product, which ends up costing more than the product itself due to royalties. In the aforementioned case, the Delhi High Court ordered Micromax to compensate based on the value of the phone, rather than the value of the technology worked in the phone.

This is a prime example of why the Competition Commission of India raised concerns about this situation. According to CCI, "If a phone sold for Rs. 1000 had a GSM chip, the price would be Rs. 12.5; if sold for Rs. 100, the price would be Rs. 1.25." Smartphones are expensive because the maker or licensee pays royalties or fees to other patent holders or developers for the software, technological gadgets, and apps that come with them. Two separate licensing costs per phone booth for using the same technology seems unfair at first glance and reflects exorbitant pricing for high-priced phones.

Accessibility of Injunctive Relief

For SEP holders, a temporary injunction is a potent tool for collecting royalties; this is because SEP implementers often rationalize charging excessive licensing fees in these situations as a safer alternative to dealing with contract violations. Since the FRAND royalties are fair compensation for the SEP, using injunctive remedies instead of voluntary licensees is clearly in violation of the FRAND agreement. Another way of looking at this is that it violates competition law by abusing a dominating position. The sole justification for seeking an injunction is when the licensee refuses to pay the FRAND royalty that the court has imposed or when monetary compensation would not be fair. The fundamental rationale for seeking an injunction is to prevent irreparable harm to one party. The concepts of equity form the basis of Indian injunctions legislation.

Royalties will thus constitute the legal remedy accessible to the SEP holder under this. If its quantity is sufficient, then that is all that has to be said. Furthermore, the path for licensing the technology under FRAND conditions is invariably laid forth by a SEP owner who wishes to establish an SSO. An injunction should only be imposed if the SEP holder has endured irreparable harm in such an instance, regardless of the licensing cost.

V. CONCLUSION

While SEPs are critical for promoting interoperability and facilitating broad technology adoption, the analysis shows that there are serious dangers of exploitative behavior when a small number of strong corporations control a disproportionate number of patents. Market competition is distorted and the goals of the FRAND framework, which aim to promote fairness and accessibility, are undermined by practices including high royalty requests, discriminatory licensing, hold-up methods, and the forceful use of injunctions. The Patent Act and the Competition Act, 2002, which form the backbone of India's legal framework, have achieved significant strides in recognizing and combating such anticompetitive trends. However, there are still obstacles to overcome, such as a lack of a cohesive SEP policy, inconsistent judicial interpretations, and enforcement gaps. To achieve a more equitable SEP environment, it is necessary to enhance communication and cooperation between competition and intellectual property agencies, provide more transparent procedures for determining fair market value (FRAND), and implement predictable licensing standards. Supporting India's larger goal of digital growth and technology self-reliance, creating a fair regulatory framework would ultimately reduce abuses based on dominance while simultaneously encouraging innovation and increasing market participation.

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